From: Oberlin, Leah A SAJ
To: Jocelyn Karazsia
Cc: Ron Miedema; White, Melody J SAJ
Subject: RE: EFH response for FLL
Date: Monday, July 18, 2011 10:34:29 AM

That should work.

On 7/18/2011 10:05 AM, Oberlin, Leah A SAJ wrote:
> I was responding to your email asking for a Friday meeting. I can do
> the 25th.
>
>

>>
>> -----Original Message-----
>> From: Ron Miedema [mailto:Miedema.Ron@epamail.epa.gov]
>> Sent: Monday, July 18, 2011 9:09 AM
>> To: Jocelyn Karazsia
>> Cc: Oberlin, Leah A SAJ; White, Melody J SAJ
>> Subject: Re: EFH response for FLL
>>
>> If it is Friday, It needs to be after 10:30 am I prefer next Monday
>> 7/25 Open all day
>>
>>
>>
>>
>>
>> Re: EFH response for FLL
>>
>>
>> Jocelyn Karazsia
>> to:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

MAY 04 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park
200000380(IP-BM)

Dear Colonel May:

This letter is in response to permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environmental Protection Agency (EPA) has reviewed the applicant's response letter dated January 25, 2001, and subsequent submittals regarding our concerns with the proposed project. In letters dated May 5, 2000, and June 1, 2000, we requested additional information and expressed our concern with the environmental impacts the proposed project would have on nearshore hard bottom resources of national importance. On April 26, 2001, members of my staff conducted a follow up site inspection to determine current conditions of the site. This letter summarizes EPA's position on the project, concentrating especially on Section 404(b)(1) Guidelines, which prohibit avoidable or significant adverse impacts to the aquatic environment.

The applicant's "Project Justification Report," states that the effects of the Lake Worth Inlet and construction of seawalls with rip-rap along a 3-mile segment north of the project have resulted in erosion within the project area and exposure of nearshore hard bottom resources. If the "no action alternative" is taken to alleviate the sediment losses within the project area, the beach will continue to erode resulting in loss of recreational beach, loss of turtle nesting habitat, and increased risk of damage to upland property. In addition, the applicant stated that any fill placed within Phipps Ocean Park Beach would result in accretion of sand material in the region of the golf course. This accretion would occur in concert with rapid erosion of the fill area resulting in escarpments in the fill area and poor public perception of the project performance.

The applicant concludes that the only practicable alternative available is to place fill material along the entire length of the project as proposed in the public notice. Based on our review and site inspection, EPA maintains that the project is not necessary, nor in the public interest and the potential environmental harm outweighs the benefit. During our site inspection on April 26, 2001, we determined that approximately 75 to100 feet of beach remains along the entire project site between the high tide line and the dune system. This observation was made during a high tide, and we did not observe any critical erosion areas which would threaten the loss of upland development, recreational interests, or wildlife habitat. To the contrary, the inspection revealed the location of 3 sea turtle nests on the upland beach and nearshore hard bottom resources along 80 percent of the project site. The nearshore hard bottom structure associated with this project is colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hard bottom habitats along the east coast of Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hard bottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hard bottom habitats found within this project site aquatic resources of national importance.

The applicant states that the City of Lake Worth is the owner of the outfall structure which is located within borrow area III. The applicant was informed by the City of Lake Worth that the outfall is inactive and has not been used for at least the past ten years, but is maintained as a potential emergency discharge. The applicant concludes that since the outfall has been inactive for the past ten years, it is expected that no treated sewage from the pipe has infiltrated the sediments within the borrow area. EPA requests that U.S. Army Corps of Engineers (USACE) require the applicant to test this site for contaminants before approving its use as a borrow area for any future projects. Furthermore, EPA believes that the impacts to sand borrow areas and their associated macro-invertebrate communities from the dredging operation may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys

National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998). In review of the adverse effects this project may have on EFH, EPA requests the applicant conduct an environmental assessment within the boundaries of the borrow areas.

EPA is also opposed to the project until the applicant provides a mitigation plan that adequately compensates for unavoidable impacts to nearshore hard bottom resources. The project toe of fill proposed extends 430 to 570 feet offshore and will impact approximately 5.17 acres of nearshore hard bottom. The applicant states by using the time averaging method, the construction of a 2.20 acre artificial reef would provide adequate compensation for impacts to 5.17 acres of hard bottom resources. EPA concludes that it is premature to review the applicant's proposed mitigation plan when impacts to nearshore hard bottom are at an unacceptable level. We request the USACE review other practicable alternatives to what is proposed to reduce or eliminate impacts to near shore hard bottom. EPA will then consider mitigation at a minimum 1:1 ratio, after the applicant has avoided and/or minimized hard bottom impacts to the extent practicable.

In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b), we continue to advise you that the proposed work will result in substantial and unacceptable adverse impacts on aquatic resources of national importance. EPA concludes that the nearshore hard bottom resources of this project should be protected.

Thank you for the opportunity to comment on this request for authorization. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanowicz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364.

Florida Department of Environmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sovereign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Biological effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 1988 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahassee, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat burial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida

Turbeville, D.B. and G.A. Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Army Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engineers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hurricane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

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Wilber, P. and M. Stern. 1992. A re-examination of infaunal studies that accompany beach renourishment projects. *In* S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv. Assoc., Tallahassee, Fl. p. 242-257.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

MAY 04 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park
200000380(IP-BM)

Dear Colonel May:

This letter is in response to permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environmental Protection Agency (EPA) has reviewed the applicant's response letter dated January 25, 2001, and subsequent submittals regarding our concerns with the proposed project. In letters dated May 5, 2000, and June 1, 2000, we requested additional information and expressed our concern with the environmental impacts the proposed project would have on nearshore hard bottom resources of national importance. On April 26, 2001, members of my staff conducted a follow up site inspection to determine current conditions of the site. This letter summarizes EPA's position on the project, concentrating especially on Section 404(b)(1) Guidelines, which prohibit avoidable or significant adverse impacts to the aquatic environment.

The applicant's "Project Justification Report," states that the effects of the Lake Worth Inlet and construction of seawalls with rip-rap along a 3-mile segment north of the project have resulted in erosion within the project area and exposure of nearshore hard bottom resources. If the "no action alternative" is taken to alleviate the sediment losses within the project area, the beach will continue to erode resulting in loss of recreational beach, loss of turtle nesting habitat, and increased risk of damage to upland property. In addition, the applicant stated that any fill placed within Phipps Ocean Park Beach would result in accretion of sand material in the region of the golf course. This accretion would occur in concert with rapid erosion of the fill area resulting in escarpments in the fill area and poor public perception of the project performance.

The applicant concludes that the only practicable alternative available is to place fill material along the entire length of the project as proposed in the public notice. Based on our review and site inspection, EPA maintains that the project is not necessary, nor in the public interest and the potential environmental harm outweighs the benefit. During our site inspection on April 26, 2001, we determined that approximately 75 to100 feet of beach remains along the entire project site between the high tide line and the dune system. This observation was made during a high tide, and we did not observe any critical erosion areas which would threaten the loss of upland development, recreational interests, or wildlife habitat. To the contrary, the inspection revealed the location of 3 sea turtle nests on the upland beach and nearshore hard bottom resources along 80 percent of the project site. The nearshore hard bottom structure associated with this project is colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hard bottom habitats along the east coast of Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hard bottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hard bottom habitats found within this project site aquatic resources of national importance.

The applicant states that the City of Lake Worth is the owner of the outfall structure which is located within borrow area III. The applicant was informed by the City of Lake Worth that the outfall is inactive and has not been used for at least the past ten years, but is maintained as a potential emergency discharge. The applicant concludes that since the outfall has been inactive for the past ten years, it is expected that no treated sewage from the pipe has infiltrated the sediments within the borrow area. EPA requests that U.S. Army Corps of Engineers (USACE) require the applicant to test this site for contaminants before approving its use as a borrow area for any future projects. Furthermore, EPA believes that the impacts to sand borrow areas and their associated macro-invertebrate communities from the dredging operation may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys

National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998). In review of the adverse effects this project may have on EFH, EPA requests the applicant conduct an environmental assessment within the boundaries of the borrow areas.

EPA is also opposed to the project until the applicant provides a mitigation plan that adequately compensates for unavoidable impacts to nearshore hard bottom resources. The project toe of fill proposed extends 430 to 570 feet offshore and will impact approximately 5.17 acres of nearshore hard bottom. The applicant states by using the time averaging method, the construction of a 2.20 acre artificial reef would provide adequate compensation for impacts to 5.17 acres of hard bottom resources. EPA concludes that it is premature to review the applicant's proposed mitigation plan when impacts to nearshore hard bottom are at an unacceptable level. We request the USACE review other practicable alternatives to what is proposed to reduce or eliminate impacts to near shore hard bottom. EPA will then consider mitigation at a minimum 1:1 ratio, after the applicant has avoided and/or minimized hard bottom impacts to the extent practicable.

In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b), we continue to advise you that the proposed work will result in substantial and unacceptable adverse impacts on aquatic resources of national importance. EPA concludes that the nearshore hard bottom resources of this project should be protected.

Thank you for the opportunity to comment on this request for authorization. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanowicz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

9 Burke 00

JUN 1 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Miller:

This letter is in response to your request for comments on the public notice for the Town of Palm Beach, Phipps Ocean Park, permit application number 200000380 (IP-DSG). The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida. The applicant proposes to obtain fill from two offshore borrow areas to place on the beach. The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Ms. Beth Burger of EPA's West Palm Beach office, inspected the site on April 27, 2000, with Mr. Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mr. Michael Johnson of the National Marine Fisheries Service (NMFS).

According to 33 C.F.R. 320.4(a), every permit application is subject to a public interest review. In performing the public interest review, the Corps of Engineers is required to consider the relative extent of the public and private need for the proposed structure or work, and the need must be balanced against environmental harm. Based upon our review and site inspection, it is our opinion that the project is not necessary nor in the public interest and environmental harm appears to outweigh the benefits. In the information provided by Coastal Technology Corporation after the public notice was issued, a "critical erosion area" is described, which is defined as "a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost." However, information demonstrating that the proposed project area is a critical erosion area was not provided. Further, based upon the site inspection, upland development, recreational interests, wildlife habitat, and important cultural resources do not appear to be threatened by erosion or recession of the beach or dune system. To the contrary, recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) would be lost if the proposed project were implemented. EPA questions the need to restore the beach over the whole project site, and EPA is especially concerned about the area next to the golf course where a large portion of nearshore consists of hardbottom reef habitat. Please provide a detailed discussion of the purpose and need for the complete length of the project.

EPA also has significant questions and concerns with the proposed borrow areas. Borrow Area 1 contains an outfall pipe. Is it a sewage outfall? A standard permit condition requires that uncontaminated fill material be used for projects such as this. Has there been any testing of sediments at Borrow Area 1 to determine contamination? Dredging in the borrow areas has the potential to impact additional hardbottom or coral reef habitats in the vicinity of the borrow areas. What safeguards will be taken to protect adjacent habitats from turbidity or other detrimental impacts of dredging?

The Clean Water Act, Section 404(b)(1) Guidelines at 40 C.F.R. Section 230.10 prohibit avoidable or significant adverse impacts to the aquatic environment. The Guidelines and the Mitigation Memorandum of Agreement between the Corps of Engineers and EPA require that an applicant demonstrate avoidance and minimization of impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. The applicant has failed to provide the necessary alternatives analysis. Please provide a detailed alternatives analysis as required under the Guidelines.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and NMFS found a much greater area of hardbottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hardbottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for all of the acreage of hardbottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hardbottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hardbottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

Nearshore hardbottom structure is colonized by an ecologically diverse community including sponges, corals, sea worms, bryozoans, and barnacles. This structure provides important shallow water fish habitat. Several lines of evidence suggest that nearshore hardbottom habitats along the mainland coast of east Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances. (Lindeman, Snyder). This project is within an area identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service for federally managed species. This area is EFH for juvenile and adult gray and schoolmaster snappers, scamp,

speckled hind, yellowedge grouper, Spanish mackerel, white grunt and spiny lobster. Juvenile gray snappers, among others, were observed during the site inspection by the agencies and are listed in the survey supplied by the applicant. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC. For these reasons, EPA considers the hardbottom habitats found within this project site aquatic resources of national importance.

EPA requests that authorization for this project be denied. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b) between our agencies, we are advising you that the proposed work will have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Ms. Burger at (561) 616-8878.

Sincerely,

John H. Hankinson, Jr.
Regional Administrator

cc: Spencer Simon, FWS, Vero Beach, F
Michael Johnson, NMFS, Miami, F

[Reference: Lindeman, Kenyon C. and David B.Snyder. Nearshore hardbottom fishes of southeast FL and effects of habitat burial caused by dredging. Fish. Bull. 97:508-525 (1999).]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

9May00

MAY 05 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

SUBJ: Town of Palm Beach, Phipps Ocean Park
PN 200000380 (IP-DSG)

Dear Colonel Miller:

This letter is in response to your request for comments on the above referenced public notice. The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Beth Burger of EPA inspected the site on April 27, 2000, with Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mike Johnson of the National Marine Fisheries Service (NMFS). According to the Clean Water Act Section 404(b)(1) Guidelines and the Memorandum of Agreement between the Corps of Engineers and EPA in determining mitigation under the CWA, an applicant must demonstrate avoidance and minimization of wetland impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. Practicable alternatives include activities which do not involve a discharge of dredged or fill material into the waters of the United States. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Please provide a detailed alternatives analysis including a discussion of the purpose and necessity of the project and an explanation of the "critical erosion area" and its criteria. EPA is particularly concerned over the need to restore the beach next to the golf course where a large portion of nearshore consists of hard bottom reef habitat. Please explain the borrow area site selection and the location of Borrow Area 1 where there is a sewer outfall.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and

NMFS found a much greater area of hard bottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hard bottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for the all of the acreage of hard bottom impacts.

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EPA recommends denial of the project at this time. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(a) between our agencies, we are advising you that the proposed work may have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Beth Burger at (561) 616-8878.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: Spencer Simon, FWS, Vero Beach, FL
Michael Johnson, NMFS, Miami, FL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

Colonel Joe Miller, District Engineer
ATTN: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

APR 14 2000

SUBJ: Town of Palm Beach
PN 200000380 (IP-DSG)

Dear Colonel Miller:

This letter is a request for an extension to the 30 day comment period for the above referenced individual permit dated March 22, 2000. The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline along Phipps Ocean Park Beach. The project is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

This request for extension is in accordance with the terms of the 1992 404(q) Memorandum of Agreement between the Department of the Army and the Environmental Protection Agency (EPA). EPA requests an extension of 15 days to the currrent 30 day comment period to enable the EPA, the U. S. Fish and Wildlife Service (FWS), and the Nation Marine Fisheries Service (NMFS) to discuss this project and inspect the site in order to provide substantive comments. EPA requests an extension of the comment period to COB May 6, 2000.

Thank you for the opportunity to review this proposal. If you have any questions, please contact Beth Burger of my staff at (561) 616-8878.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: Mike Johnson, NMFS, Miami, FL
Spencer Simon, FWS, Vero Beach, FL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
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400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

Dear Colonel May:

This is in response to your letter dated August 31, 2001, requesting U.S. Environmental Protection Agency (EPA) comments during the scoping process for developing a Supplemental Environmental Impact Statement (SEIS) for permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

EPA is pleased that the U.S. Army Corps of Engineers (USACE) will conduct an SEIS for the Phipps Ocean Beach Nourishment Project. We will work closely with your staff to ensure that the SEIS will provide the appropriate information for us, as environmental stewards, to make sound decisions on future beach nourishment projects. EPA provides the following comments during the scoping process of the SEIS:

-EPA requests the SEIS include a review of the primary, secondary, and cumulative impacts beach nourishment projects have on nearshore and offshore hardbottom resources. It is our understanding that the USACE will soon be processing ten additional beach nourishment projects within the vicinity of the Phipps Ocean Park site. Cumulative impacts caused by all these beach nourishment projects can only be adequately assessed by expanding the scope of the SEIS area.

-We request that the SEIS contain an assessment of the functions offshore and nearshore hardbottom habitats provide which will be affected by dredge and fill activity. Offshore and nearshore hardbottom structure can be colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hardbottom habitats along the east coast of Florida can serve as

nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance.

- EPA requests the SEIS provide information on impacts to the macro-invertebrate communities associated with the proposed borrow area. We believe that the impacts from the dredging operation to sand borrow areas and their associated macro-invertebrate communities may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998).

-EPA requests the SEIS include an assessment of the functions and values provided by artificial reef habitats placed in various depths and compare them to those of natural hardbottom habitats. This assessment should include a review of data collected for the Juno Beach Renourishment Project.

Thank you for the opportunity to comment on the scope of this SEIS. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanowicz. 1989. The seasón dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364.

Florida Department of Environmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sovereign Submerged Lands. January 8, 1998. File Number 0128760-001.

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UNITED S ATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

MAY 0 4 2001

Colonel James G. May, Dis ict Engineer
Department of the Army
Jacksonville District Corps f Engineers
Attn: Brice McKoy
400 North Congress Avenu , Suite 130
West Palm Beach, Fl 3340

SUBJECT: Phipps Ocean I urk
200000380(IP- 3M)

Dear Colonel May:

This letter is in respc ıse to permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. he purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along P ipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredge material would be obtained from 2 borrow areas located 0.34 miles offshore, between Departn ent of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the At ıntic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, T wnship 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environm ıtal Protection Agency (EPA) has reviewed the applicant's response letter dated January 25, 20 1, and subsequent submittals regarding our concerns with the proposed project. In lette dated May 5, 2000, and June 1, 2000, we requested additional information and expresse our concern with the environmental impacts the proposed project would have on nearshore l ard bottom resources of national importance. On April 26, 2001, members of my staff cond cted a follow up site inspection to determine current conditions of the site. This letter summariz s EPA's position on the project, concentrating especially on Section 404(b)(1) Guidelines, whi h prohibit avoidable or significant adverse impacts to the aquatic environment.

The applicant's "Pr ject Justification Report," states that the effects of the Lake Worth Inlet and construction of s awalls with rip-rap along a 3-mile segment north of the project have resulted in erosion within he project area and exposure of nearshore hard bottom resources. If the "no action alternati e" is taken to alleviate the sediment losses within the project area, the beach will continue to ero le resulting in loss of recreational beach, loss of turtle nesting habitat, and increased risk of dam ge to upland property. In addition, the applicant stated that any fill placed within Phipps Oce n Park Beach would result in accretion of sand material in the region of the golf course. This a ccretion would occur in concert with rapid erosion of the fill area resulting in escarpments i the fill area and poor public perception of the project performance.

The applicant concludes tl ıt the only practicable alternative available is to place fill material along the entire length of ı ıe project as proposed in the public notice. Based on our review and site inspection, EPA main uins that the project is not necessary, nor in the public interest and the potential environmental h: ɯ outweighs the benefit. During our site inspection on April 26, 2001, we determined that pproximately 75 to100 feet of beach remains along the entire project site between the high tide .ne and the dune system. This observation was made during a high tide, and we did not obser ɛ any critical erosion areas which would threaten the loss of upland development, recreational nterests, or wildlife habitat. To the contrary, the inspection revealed the location of 3 sea turtle ıests on the upland beach and nearshore hard bottom resources along 80 percent of the project s ɛ. The nearshore hard bottom structure associated with this project is colonized by an ecologica y diverse community of algae, porifera, and cnidaria, and provides important shallow water f .h habitat. Several lines of evidence suggest the nearshore hard bottom habitats along the ast coast of Florida can serve as nursery areas for many coastal fish species and can support cɛ ısiderable larval abundances (Lindeman, Snyder 1999). This project is within an area identifiɛ as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hard bottom hab :ats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amend nents by the SAFMC (NMFS 1999). For these reasons, EPA considers the hard bottom ıabitats found within this project site aquatic resources of national importance.

The applicant states that the City of Lake Worth is the owner of the outfall structure which is located within borrow ɛ ea III. The applicant was informed by the City of Lake Worth that the outfall is inactive and has ıot been used for at least the past ten years, but is maintained as a potential emergency disch rge. The applicant concludes that since the outfall has been inactive for the past ten years, it is :xpected that no treated sewage from the pipe has infiltrated the sediments within the borr w area. EPA requests that U.S. Army Corps of Engineers (USACE) require the applicant to te : this site for contaminants before approving its use as a borrow area for any future projects. F rthermore, EPA believes that the impacts to sand borrow areas and their associated macro-in ɛrtebrate communities from the dredging operation may be more extensive and long-term t an has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1 94, and 1996). Previous studies had concluded that perturbations within borrow areas were ıegligible due to rapid re-establishment of the infaunal communities. However, re-examination ɔf the data from the borrow and reference areas of four beach renourishment projects or the southeast coast of Florida, found that changes to the infaunal community structure may ɔersist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in liversity and abundance of the infaunal community in borrow areas several years following th dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have or macro-invertebrate communities should be considered as significant because they are either di :ctly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird nd Ulanowicz 1989). The State of Florida and the Florida Keys

National Marine Sanctuary ıave prohibited the collection of "live sand" (i.e. sand material, typically containing a high liversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within · ıe Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores an· the removal of this habitat was determined to adversely impact marine productivity, fisher :s, wildlife habitat, and water quality (FDEP 1998). In review of the adverse effects this project nay have on EFH, EPA requests the applicant conduct an environmental assessment ·ithin the boundaries of the borrow areas.

EPA is also opposed › the project until the applicant provides a mitigation plan that adequately compensates fo unavoidable impacts to nearshore hard bottom resources. The project toe of fill proposed :xtends 430 to 570 feet offshore and will impact approximately 5.17 acres of nearshore har . bottom. The applicant states by using the time averaging method, the construction of a 2.20 ± :re artificial reef would provide adequate compensation for impacts to 5.17 acres of hard bottom ı sources. EPA concludes that it is premature to review the applicant's proposed mitigation plan v ıen impacts to nearshore hard bottom are at an unacceptable level. We request the USACE re· ıew other practicable alternatives to what is proposed to reduce or eliminate impacts to near s ore hard bottom. EPA will then consider mitigation at a minimum 1:1 ratio, after the applican has avoided and/or minimized hard bottom impacts to the extent practicable.

In accordance with t e procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b), v : continue to advise you that the proposed work will result in substantial and unacceptab ɜ adverse impacts on aquatic resources of national importance. EPA concludes that the nearsho : hard bottom resources of this project should be protected.

Thank you for the oj ›ortunity to comment on this request for authorization. If you should have any questions, please :ontact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 1 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Miller:

This letter is in response to your request for comments on the public notice for the Town of Palm Beach, Phipps Ocean Park, permit application number 200000380 (IP-DSG). The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida. The applicant proposes to obtain fill from two offshore borrow areas to place on the beach. The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Ms. Beth Burger of EPA's West Palm Beach office, inspected the site on April 27, 2000, with Mr. Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mr. Michael Johnson of the National Marine Fisheries Service (NMFS).

According to 33 C.F.R. 320.4(a), every permit application is subject to a public interest review. In performing the public interest review, the Corps of Engineers is required to consider the relative extent of the public and private need for the proposed structure or work, and the need must be balanced against environmental harm. Based upon our review and site inspection, it is our opinion that the project is not necessary nor in the public interest and environmental harm appears to outweigh the benefits. In the information provided by Coastal Technology Corporation after the public notice was issued, a "critical erosion area" is described, which is defined as "a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost." However, information demonstrating that the proposed project area is a critical erosion area was not provided. Further, based upon the site inspection, upland development, recreational interests, wildlife habitat, and important cultural resources do not appear to be threatened by erosion or recession of the beach or dune system. To the contrary, recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) would be lost if the proposed project were implemented. EPA questions the need to restore the beach over the whole project site, and EPA is especially concerned about the area next to the golf course where a large portion of nearshore consists of hardbottom reef habitat. Please provide a detailed discussion of the purpose and need for the complete length of the project.

EPA also has significant questions and concerns with the proposed borrow areas. Borrow Area 1 contains an outfall pipe. Is it a sewage outfall? A standard permit condition requires that uncontaminated fill material be used for projects such as this. Has there been any testing of sediments at Borrow Area 1 to determine contamination? Dredging in the borrow areas has the potential to impact additional hardbottom or coral reef habitats in the vicinity of the borrow areas. What safeguards will be taken to protect adjacent habitats from turbidity or other detrimental impacts of dredging?

The Clean Water Act, Section 404(b)(1) Guidelines at 40 C.F.R. Section 230.10 prohibit avoidable or significant adverse impacts to the aquatic environment. The Guidelines and the Mitigation Memorandum of Agreement between the Corps of Engineers and EPA require that an applicant demonstrate avoidance and minimization of impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. The applicant has failed to provide the necessary alternatives analysis. Please provide a detailed alternatives analysis as required under the Guidelines.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and NMFS found a much greater area of hardbottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hardbottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for all of the acreage of hardbottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hardbottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hardbottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

Nearshore hardbottom structure is colonized by an ecologically diverse community including sponges, corals, sea worms, bryozoans, and barnacles. This structure provides important shallow water fish habitat. Several lines of evidence suggest that nearshore hardbottom habitats along the mainland coast of east Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances. (Lindeman, Snyder). This project is within an area identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service for federally managed species. This area is EFH for juvenile and adult gray and schoolmaster snappers, scamp,

speckled hind, yellowedge grouper, Spanish mackerel, white grunt and spiny lobster. Juvenile gray snappers, among others, were observed during the site inspection by the agencies and are listed in the survey supplied by the applicant. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC. For these reasons, EPA considers the hardbottom habitats found within this project site aquatic resources of national importance.

EPA requests that authorization for this project be denied. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b) between our agencies, we are advising you that the proposed work will have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Ms. Burger at (561) 616-8878.

Sincerely,

John H. Hankinson, Jr.
Regional Administrator

cc: Spencer Simon, FWS, Vero Beach, F
Michael Johnson, NMFS, Miami, F

[Reference: Lindeman, Kenyon C. and David B.Snyder. Nearshore hardbottom fishes of southeast FL and effects of habitat burial caused by dredging. Fish. Bull. 97:508-525 (1999).]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

1 May 00

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

MAY 05 2000

SUBJ: Town of Palm Beach, Phipps Ocean Park
PN 200000380 (IP-DSG)

Dear Colonel Miller:

This letter is in response to your request for comments on the above referenced public notice. The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Beth Burger of EPA inspected the site on April 27, 2000, with Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mike Johnson of the National Marine Fisheries Service (NMFS). According to the Clean Water Act Section 404(b)(1) Guidelines and the Memorandum of Agreement between the Corps of Engineers and EPA in determining mitigation under the CWA, an applicant must demonstrate avoidance and minimization of wetland impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. Practicable alternatives include activities which do not involve a discharge of dredged or fill material into the waters of the United States. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Please provide a detailed alternatives analysis including a discussion of the purpose and necessity of the project and an explanation of the "critical erosion area" and its criteria. EPA is particularly concerned over the need to restore the beach next to the golf course where a large portion of nearshore consists of hard bottom reef habitat. Please explain the borrow area site selection and the location of Borrow Area 1 where there is a sewer outfall.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and

NMFS found a much greater area of hard bottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hard bottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for the all of the acreage of hard bottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hard bottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hard bottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

EPA recommends denial of the project at this time. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(a) between our agencies, we are advising you that the proposed work may have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Beth Burger at (561) 616-8878.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: Spencer Simon, FWS, Vero Beach, FL
Michael Johnson, NMFS, Miami, FL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

Dear Colonel May:

This is in response to your letter dated August 31, 2001, requesting U.S. Environmental Protection Agency (EPA) comments during the scoping process for developing a Supplemental Environmental Impact Statement (SEIS) for permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

EPA is pleased that the U.S. Army Corps of Engineers (USACE) will conduct an SEIS for the Phipps Ocean Beach Nourishment Project. We will work closely with your staff to ensure that the SEIS will provide the appropriate information for us, as environmental stewards, to make sound decisions on future beach nourishment projects. EPA provides the following comments during the scoping process of the SEIS:

-EPA requests the SEIS include a review of the primary, secondary, and cumulative impacts beach nourishment projects have on nearshore and offshore hardbottom resources. It is our understanding that the USACE will soon be processing ten additional beach nourishment projects within the vicinity of the Phipps Ocean Park site. Cumulative impacts caused by all these beach nourishment projects can only be adequately assessed by expanding the scope of the SEIS area.

-We request that the SEIS contain an assessment of the functions offshore and nearshore hardbottom habitats provide which will be affected by dredge and fill activity. Offshore and nearshore hardbottom structure can be colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hardbottom habitats along the east coast of Florida can serve as

nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance.

- EPA requests the SEIS provide information on impacts to the macro-invertebrate communities associated with the proposed borrow area. We believe that the impacts from the dredging operation to sand borrow areas and their associated macro-invertebrate communities may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998).

-EPA requests the SEIS include an assessment of the functions and values provided by artificial reef habitats placed in various depths and compare them to those of natural hardbottom habitats. This assessment should include a review of data collected for the Juno Beach Renourishment Project.

Thank you for the opportunity to comment on the scope of this SEIS. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

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Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat burial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida.

Turbeville, D.B. and G.A. Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Army Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engineers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hurricane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final environmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 1992. A re-examination of infaunal studies that accompany beach renourishment projects. *In* S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv. Assoc., Tallahassee, Fl. p. 242-257.

UNITED S ATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

MAY 04 2001

Colonel James G. May, Dis ict Engineer
Department of the Army
Jacksonville District Corps f Engineers
Attn: Brice McKoy
400 North Congress Avenu , Suite 130
West Palm Beach, Fl 3340

SUBJECT: Phipps Ocean I urk
200000380(IP- 3M)

Dear Colonel May:

This letter is in resp ise to permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. he purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along P ipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredge material would be obtained from 2 borrow areas located 0.34 miles offshore, between Departn nt of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the At ntic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, T wnship 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environm ital Protection Agency (EPA) has reviewed the applicant's response letter dated January 25, 20 1, and subsequent submittals regarding our concerns with the proposed project. In lette dated May 5, 2000, and June 1, 2000, we requested additional information and expresse our concern with the environmental impacts the proposed project would have on nearshore l ard bottom resources of national importance. On April 26, 2001, members of my staff cond cted a follow up site inspection to determine current conditions of the site. This letter summariz s EPA's position on the project, concentrating especially on Section 404(b)(1) Guidelines, whi h prohibit avoidable or significant adverse impacts to the aquatic environment.

The applicant's "Pr ject Justification Report," states that the effects of the Lake Worth Inlet and construction of s awalls with rip-rap along a 3-mile segment north of the project have resulted in erosion within he project area and exposure of nearshore hard bottom resources. If the "no action alternati e" is taken to alleviate the sediment losses within the project area, the beach will continue to er le resulting in loss of recreational beach, loss of turtle nesting habitat, and increased risk of dam ge to upland property. In addition, the applicant stated that any fill placed within Phipps Oce n Park Beach would result in accretion of sand material in the region of the golf course. This a cretion would occur in concert with rapid erosion of the fill area resulting in escarpments the fill area and poor public perception of the project performance.

The applicant concludes tl at the only practicable alternative available is to place fill material along the entire length of t ie project as proposed in the public notice. Based on our review and site inspection, EPA main tins that the project is not necessary, nor in the public interest and the potential environmental h: m outweighs the benefit. During our site inspection on April 26, 2001, we determined that pproximately 75 to100 feet of beach remains along the entire project site between the high tide ne and the dune system. This observation was made during a high tide, and we did not obser e any critical erosion areas which would threaten the loss of upland development, recreational nterests, or wildlife habitat. To the contrary, the inspection revealed the location of 3 sea turtle iests on the upland beach and nearshore hard bottom resources along 80 percent of the project s e. The nearshore hard bottom structure associated with this project is colonized by an ecologica y diverse community of algae, porifera, and cnidaria, and provides important shallow water f h habitat. Several lines of evidence suggest the nearshore hard bottom habitats along the ast coast of Florida can serve as nursery areas for many coastal fish species and can support c siderable larval abundances (Lindeman, Snyder 1999). This project is within an area identifie as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hard bottom hab ats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amend nents by the SAFMC (NMFS 1999). For these reasons, EPA considers the hard bottom abitats found within this project site aquatic resources of national importance.

The applicant state: that the City of Lake Worth is the owner of the outfall structure which is located within borrow a ea III. The applicant was informed by the City of Lake Worth that the outfall is inactive and has ot been used for at least the past ten years, but is maintained as a potential emergency disch rge. The applicant concludes that since the outfall has been inactive for the past ten years, it is xpected that no treated sewage from the pipe has infiltrated the sediments within the borr w area. EPA requests that U.S. Army Corps of Engineers (USACE) require the applicant to te this site for contaminants before approving its use as a borrow area for any future projects. F rthermore, EPA believes that the impacts to sand borrow areas and their associated macro-in rtebrate communities from the dredging operation may be more extensive and long-term t an has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1 94, and 1996). Previous studies had concluded that perturbations within borrow areas were egligible due to rapid re-establishment of the infaunal communities. However, re-examination f the data from the borrow and reference areas of four beach renourishment projects or the southeast coast of Florida, found that changes to the infaunal community structure may ersist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in liversity and abundance of the infaunal community in borrow areas several years following th dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have or macro-invertebrate communities should be considered as significant because they are either di ctly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird nd Ulanowicz 1989). The State of Florida and the Florida Keys

National Marine Sanctuary ıave prohibited the collection of "live sand" (i.e. sand material, typically containing a high liversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within · ıe Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores an(the removal of this habitat was determined to adversely impact marine productivity, fisher :s, wildlife habitat, and water quality (FDEP 1998). In review of the adverse effects this project nay have on EFH, EPA requests the applicant conduct an environmental assessment ·ithin the boundaries of the borrow areas.

EPA is also opposed › the project until the applicant provides a mitigation plan that adequately compensates fo unavoidable impacts to nearshore hard bottom resources. The project toe of fill proposed :xtends 430 to 570 feet offshore and will impact approximately 5.17 acres of nearshore har . bottom. The applicant states by using the time averaging method, the construction of a 2.20 ; :re artificial reef would provide adequate compensation for impacts to 5.17 acres of hard bottom ı sources. EPA concludes that it is premature to review the applicant's proposed mitigation plan v ıen impacts to nearshore hard bottom are at an unacceptable level. We request the USACE re· ıew other practicable alternatives to what is proposed to reduce or eliminate impacts to near s ore hard bottom. EPA will then consider mitigation at a minimum 1:1 ratio, after the applican has avoided and/or minimized hard bottom impacts to the extent practicable.

In accordance with t e procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b), v : continue to advise you that the proposed work will result in substantial and unacceptab ɜ adverse impacts on aquatic resources of national importance. EPA concludes that the nearsho : hard bottom resources of this project should be protected.

Thank you for the oj ›ortunity to comment on this request for authorization. If you should have any questions, please :ontact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanow cz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364

Florida Department of Env ronmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sov eign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Bi ogical effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 19 3 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahass e, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat b ial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mar late for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida

Turbeville, D.B. and G.A Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Ar y Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engi eers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hurr cane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engi eers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design lemorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engi ieers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final envi onmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 992. A re-examination of infaunal studies that accompany beach renourishment projects. n S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv Assoc., Tallahassee, Fl. p. 242-257.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 1 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Miller:

This letter is in response to your request for comments on the public notice for the Town of Palm Beach, Phipps Ocean Park, permit application number 200000380 (IP-DSG). The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida. The applicant proposes to obtain fill from two offshore borrow areas to place on the beach. The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Ms. Beth Burger of EPA's West Palm Beach office, inspected the site on April 27, 2000, with Mr. Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mr. Michael Johnson of the National Marine Fisheries Service (NMFS).

According to 33 C.F.R. 320.4(a), every permit application is subject to a public interest review. In performing the public interest review, the Corps of Engineers is required to consider the relative extent of the public and private need for the proposed structure or work, and the need must be balanced against environmental harm. Based upon our review and site inspection, it is our opinion that the project is not necessary nor in the public interest and environmental harm appears to outweigh the benefits. In the information provided by Coastal Technology Corporation after the public notice was issued, a "critical erosion area" is described, which is defined as "a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost." However, information demonstrating that the proposed project area is a critical erosion area was not provided. Further, based upon the site inspection, upland development, recreational interests, wildlife habitat, and important cultural resources do not appear to be threatened by erosion or recession of the beach or dune system. To the contrary, recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) would be lost if the proposed project were implemented. EPA questions the need to restore the beach over the whole project site, and EPA is especially concerned about the area next to the golf course where a large portion of nearshore consists of hardbottom reef habitat. Please provide a detailed discussion of the purpose and need for the complete length of the project.

EPA also has significant questions and concerns with the proposed borrow areas. Borrow Area 1 contains an outfall pipe. Is it a sewage outfall? A standard permit condition requires that uncontaminated fill material be used for projects such as this. Has there been any testing of sediments at Borrow Area 1 to determine contamination? Dredging in the borrow areas has the potential to impact additional hardbottom or coral reef habitats in the vicinity of the borrow areas. What safeguards will be taken to protect adjacent habitats from turbidity or other detrimental impacts of dredging?

The Clean Water Act, Section 404(b)(1) Guidelines at 40 C.F.R. Section 230.10 prohibit avoidable or significant adverse impacts to the aquatic environment. The Guidelines and the Mitigation Memorandum of Agreement between the Corps of Engineers and EPA require that an applicant demonstrate avoidance and minimization of impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. The applicant has failed to provide the necessary alternatives analysis. Please provide a detailed alternatives analysis as required under the Guidelines.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and NMFS found a much greater area of hardbottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hardbottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for all of the acreage of hardbottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hardbottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hardbottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

Nearshore hardbottom structure is colonized by an ecologically diverse community including sponges, corals, sea worms, bryozoans, and barnacles. This structure provides important shallow water fish habitat. Several lines of evidence suggest that nearshore hardbottom habitats along the mainland coast of east Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances. (Lindeman, Snyder). This project is within an area identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service for federally managed species. This area is EFH for juvenile and adult gray and schoolmaster snappers, scamp,

speckled hind, yellowedge grouper, Spanish mackerel, white grunt and spiny lobster. Juvenile gray snappers, among others, were observed during the site inspection by the agencies and are listed in the survey supplied by the applicant. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC. For these reasons, EPA considers the hardbottom habitats found within this project site aquatic resources of national importance.

EPA requests that authorization for this project be denied. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b) between our agencies, we are advising you that the proposed work will have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Ms. Burger at (561) 616-8878.

Sincerely,

John H. Hankinson, Jr.
Regional Administrator

cc: Spencer Simon, FWS, Vero Beach, F
Michael Johnson, NMFS, Miami, F

[Reference: Lindeman, Kenyon C. and David B.Snyder. Nearshore hardbottom fishes of southeast FL and effects of habitat burial caused by dredging. Fish. Bull. 97:508-525 (1999).]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

9 May 00

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

MAY 05 2000

SUBJ: Town of Palm Beach, Phipps Ocean Park
PN 200000380 (IP-DSG)

Dear Colonel Miller:

This letter is in response to your request for comments on the above referenced public notice. The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Beth Burger of EPA inspected the site on April 27, 2000, with Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mike Johnson of the National Marine Fisheries Service (NMFS). According to the Clean Water Act Section 404(b)(1) Guidelines and the Memorandum of Agreement between the Corps of Engineers and EPA in determining mitigation under the CWA, an applicant must demonstrate avoidance and minimization of wetland impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. Practicable alternatives include activities which do not involve a discharge of dredged or fill material into the waters of the United States. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Please provide a detailed alternatives analysis including a discussion of the purpose and necessity of the project and an explanation of the "critical erosion area" and its criteria. EPA is particularly concerned over the need to restore the beach next to the golf course where a large portion of nearshore consists of hard bottom reef habitat. Please explain the borrow area site selection and the location of Borrow Area 1 where there is a sewer outfall.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and

NMFS found a much greater area of hard bottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hard bottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for the all of the acreage of hard bottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hard bottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hard bottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

EPA recommends denial of the project at this time. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(a) between our agencies, we are advising you that the proposed work may have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Beth Burger at (561) 616-8878.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: Spencer Simon, FWS, Vero Beach, FL
Michael Johnson, NMFS, Miami, FL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 0 3 2002

Chief, Regulatory Branch
Jacksonville District, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, FL 33401
Attention: Mr. Dale Beter

Subject: Draft Supplement to the Environmental Impact Statement (DSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ # 020353, ERP# COE-E 30039-FL

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the consequences of providing shore protection to the above reach, viz., DEP survey monuments R-116 to R-126. This beach segment was identified in the county-wide General Design Memorandum as being in need of nourishment due to the long-term erosion impacts fostered by maintenance dredging of Lake Worth Inlet. The recent practice of armoring the coastline north of the project area has altered its historic sand budget which has also exacerbated the erosion problem. Widening the narrowed beach will provide/maintain a degree of storm protection to the high rise condominiums which front this reach of shoreline and expand the turtle nesting habitat and public recreation waterward of the seawalls which protect this upland development.

Approximately 1.5 M yards of beach quality sand from two borrow sites to the south of the fill will be used to nourish this 1.9 mile segment of shoreline. Based on previous erosion rates, it is projected that additional material will have to be dredged at 8-year intervals to maintain the initial template. Buffer areas (at least 400') around adjacent hardbottom communities in the borrow area have been designated to lessen potential adverse environmental impacts during the transfer operation(s). Installation of 3.1 acres of artificial reef is proposed as mitigation for the unavoidable losses to biotic communities which be inundated by the dredged material.

As a result of our review, the following observations are provided for your use in preparing/improving the final EIS:

Page iv 6 *Major Findings and Conclusions*. The SEIS states that measures have been taken to avoid, minimize, and compensate for adverse impacts including reducing the fill placement area to avoid nearshore hardbottom resources. Nonetheless, the SEIS preferred alternative comprises the same amount of fill material and extent as was initially proposed in the Public Notice for the project dated, March 22, 2000. In letters dated May 5, 2000 and June 1, 2000, EPA requested the scope of the project be reduced, particularly south of R-121. Irrespective of anticipated sand spreading which occurs after all sand nourishment operations, this design change would have lessened nearshore hard bottom impacts in the vicinity of the adjacent golf course. After our review of this documentation it is unclear what measures were examined to avoid and minimize adverse impacts to hard bottom resources.

An artificial reef (3.1 acres) is being proposed for construction approximately 500 feet north of the project site. However, the SEIS did not include sufficient data about this location (and its depth) to make a determination as to its effectiveness (long-term) as mitigation for the expected losses. Further, EPA is concerned that in the absence of sufficient underlying support (hardbottoms) the reef material will eventually sink into the sand. As you recall, this is what happened at Juno Beach when a similar mitigation structure was built over a sandy substrate.

Furthermore, it remains to be demonstrated whether the proposed artificial structure(s) will compensate for the losses attendant to project impacts. In our scoping letter dated September 25, 2001, we requested that the SEIS include an assessment of the functions and values provided by artificial reefs (placed at different depths) compared with those of the affected natural hardbottoms. In our estimation this is an important evaluation since this project will impact a narrow band of hardbottom resources located adjacent to and encompassing the entire 1.9 mile length of the project.

On the other hand, the proposed mitigation consists of clustering reef structure in one 3.1 acre block which already contains natural nearshore hardbottom communities. We agree that reef structure is desirable, but it has not been demonstrated whether this dense concentration of material at one point on the shoreline compensates for some structure along an almost 2 mile reach. Hence, we were pleased to note that there will be a research effort which will attempt to determine whether construction of a discrete reef adequately provides the necessary in-kind mitigation for the loss of linear nearshore hardbottom resources. If the results of this study indicate that this is not the case, there should be a commitment to provide additional mitigation.

One of the project needs is to restore and maintain the beach for public recreational use, thus benefitting the local economy and creating a public asset. The SEIS would be improved in this regard with some evaluation of the adverse effects on recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) that would be lost if the preferred alternative is selected.

Page 43. Table 2.2 *Major Features and Direct and Indirect Impacts of the proposed Action and Other Alternatives.*

Page 43. *Total Cost*: The statement is made that if the No-Action Alternative were selected, net land losses would be $18 million. It would be helpful if there were some general explanation(s) as to how this and the other values in Table 2.2 were derived. The dry beach in question can only be maintained via indefinite renourishment which is becoming increasingly costly, e.g., more that $14 million during the first 15 years of the project. While the excavated sand is effective in reducing the annual monetary losses from minor storm events (approximately $1.4 M); larger hurricanes would continue to result in extensive property damages. This combination of circumstances makes it difficult to interpret how relative values are assigned unless all the underlying assumptions are detailed.

Appendix E. *Reef Mitigation and Monitoring Program*: Appendices E and F reference the state agencies (e.g.,Florida Department of Environmental Protection) primarily responsible for approval and acceptance of the proposed mitigation together with other natural resources addressed in the SEIS. However, there are federal agencies which also have responsibilities in this regard and this should be noted in the final EIS.

EPA requested that the SEIS provide information on the impacts to the macro-invertebrate communities residing in the proposed borrow area. Instead, the applicant conducted a video survey (Appendix H) of the borrow areas which provides a qualitative overview of the various biotic assemblages. This macro-characterization is instructive, but it does not provide the necessary information to determine whether any additional mitigation would be necessary to compensate for the dredging which will occur in Sites III and IV.

While seven potential borrow sites are mentioned in the text and depicted in Figure 2.6, it would be helpful if a summary of the pertinent information in Coastal Tech 2000d were provided in the final document to verify that Sites III and IV can meet the sediment needs of the project at the least environmental costs.

The SEIS states (page 101) that secondary impacts (elevation of suspended solids) could include downdrift of the project area as "fines" winnow from the material placed in the beach. These secondary effects would reduce algal production (reductions in light levels) and could interfere with the ability of coral to feed heterotrophically. In composite; this would diminish biological function/diversity. Since all borrow material contains some percentage of "fines", this is an unavoidable impact. The SEIS should provide, at least, a quantified range of significance for these secondary impacts and propose appropriate mitigation for them.

On the basis of our review a rating of EC-2 has been assigned. That is, we have some environmental concerns about whether the overall impacts (direct/indirect) attendant to this proposal have been adequately characterized and believe that these short-coming will need to be addressed by additional information in the final document.

Thank you for providing the opportunity to provide comments on the SEIS. If you should have any questions or need additional information on the above comments, please contact Ron Miedema (EPA South Florida Office) at (561) 616-8741.

Sincerely,

Heinz J. Mueller. Chief
Office of Environmental Assessment
Environmental Accountability Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

Dear Colonel May:

This is in response to your letter dated August 31, 2001, requesting U.S. Environmental Protection Agency (EPA) comments during the scoping process for developing a Supplemental Environmental Impact Statement (SEIS) for permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

EPA is pleased that the U.S. Army Corps of Engineers (USACE) will conduct an SEIS for the Phipps Ocean Beach Nourishment Project. We will work closely with your staff to ensure that the SEIS will provide the appropriate information for us, as environmental stewards, to make sound decisions on future beach nourishment projects. EPA provides the following comments during the scoping process of the SEIS:

-EPA requests the SEIS include a review of the primary, secondary, and cumulative impacts beach nourishment projects have on nearshore and offshore hardbottom resources. It is our understanding that the USACE will soon be processing ten additional beach nourishment projects within the vicinity of the Phipps Ocean Park site. Cumulative impacts caused by all these beach nourishment projects can only be adequately assessed by expanding the scope of the SEIS area.

-We request that the SEIS contain an assessment of the functions offshore and nearshore hardbottom habitats provide which will be affected by dredge and fill activity. Offshore and nearshore hardbottom structure can be colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hardbottom habitats along the east coast of Florida can serve as

nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance.

- EPA requests the SEIS provide information on impacts to the macro-invertebrate communities associated with the proposed borrow area. We believe that the impacts from the dredging operation to sand borrow areas and their associated macro-invertebrate communities may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998).

-EPA requests the SEIS include an assessment of the functions and values provided by artificial reef habitats placed in various depths and compare them to those of natural hardbottom habitats. This assessment should include a review of data collected for the Juno Beach Renourishment Project.

Thank you for the opportunity to comment on the scope of this SEIS. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

RMHarvey

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanowicz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364.

Florida Department of Environmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sovereign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Biological effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 1988 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahassee, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat burial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida.

Turbeville, D.B. and G.A. Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Army Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engineers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hurricane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final environmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 1992. A re-examination of infaunal studies that accompany beach renourishment projects. *In* S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv. Assoc., Tallahassee, Fl. p. 242-257.

UNITED S ATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

MAY 04 2001

Colonel James G. May, Dis ict Engineer
Department of the Army
Jacksonville District Corps f Engineers
Attn: Brice McKoy
400 North Congress Avenu , Suite 130
West Palm Beach, Fl 3340

SUBJECT: Phipps Ocean I urk
200000380(IP- 3M)

Dear Colonel May:

This letter is in respc ıse to permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. he purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along P ipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredge material would be obtained from 2 borrow areas located 0.34 miles offshore, between Departn ent of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the At ıntic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, T wnship 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environm ıtal Protection Agency (EPA) has reviewed the applicant's response letter dated January 25, 2(1, and subsequent submittals regarding our concerns with the proposed project. In lette dated May 5, 2000, and June 1, 2000, we requested additional information and expresse our concern with the environmental impacts the proposed project would have on nearshore l ard bottom resources of national importance. On April 26, 2001, members of my staff cond cted a follow up site inspection to determine current conditions of the site. This letter summariz s EPA's position on the project, concentrating especially on Section 404(b)(1) Guidelines, whi h prohibit avoidable or significant adverse impacts to the aquatic environment.

The applicant's "Pr ject Justification Report," states that the effects of the Lake Worth Inlet and construction of s awalls with rip-rap along a 3-mile segment north of the project have resulted in erosion within he project area and exposure of nearshore hard bottom resources. If the "no action alternati e" is taken to alleviate the sediment losses within the project area, the beach will continue to ero le resulting in loss of recreational beach, loss of turtle nesting habitat, and increased risk of dam ge to upland property. In addition, the applicant stated that any fill placed within Phipps Oce n Park Beach would result in accretion of sand material in the region of the golf course. This a cretion would occur in concert with rapid erosion of the fill area resulting in escarpments i the fill area and poor public perception of the project performance.

The applicant concludes tl ıt the only practicable alternative available is to place fill material along the entire length of ı ıe project as proposed in the public notice. Based on our review and site inspection, EPA main uns that the project is not necessary, nor in the public interest and the potential environmental h: m outweighs the benefit. During our site inspection on April 26, 2001, we determined that pproximately 75 to100 feet of beach remains along the entire project site between the high tide ne and the dune system. This observation was made during a high tide, and we did not obser e any critical erosion areas which would threaten the loss of upland development, recreational nterests, or wildlife habitat. To the contrary, the inspection revealed the location of 3 sea turtle ıests on the upland beach and nearshore hard bottom resources along 80 percent of the project s e. The nearshore hard bottom structure associated with this project is colonized by an ecologica y diverse community of algae, porifera, and cnidaria, and provides important shallow water f h habitat. Several lines of evidence suggest the nearshore hard bottom habitats along the ast coast of Florida can serve as nursery areas for many coastal fish species and can support c ısiderable larval abundances (Lindeman, Snyder 1999). This project is within an area identifie as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hard bottom hab ats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amend nents by the SAFMC (NMFS 1999). For these reasons, EPA considers the hard bottom ıabitats found within this project site aquatic resources of national importance.

The applicant state: that the City of Lake Worth is the owner of the outfall structure which is located within borrow a ea III. The applicant was informed by the City of Lake Worth that the outfall is inactive and has ıot been used for at least the past ten years, but is maintained as a potential emergency disch rge. The applicant concludes that since the outfall has been inactive for the past ten years, it is expected that no treated sewage from the pipe has infiltrated the sediments within the borr w area. EPA requests that U.S. Army Corps of Engineers (USACE) require the applicant to te this site for contaminants before approving its use as a borrow area for any future projects. F rthermore, EPA believes that the impacts to sand borrow areas and their associated macro-in ertebrate communities from the dredging operation may be more extensive and long-term t an has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1 94, and 1996). Previous studies had concluded that perturbations within borrow areas were ıegligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects or the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in liversity and abundance of the infaunal community in borrow areas several years following th dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have or macro-invertebrate communities should be considered as significant because they are either di ctly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird nd Ulanowicz 1989). The State of Florida and the Florida Keys

National Marine Sanctuary ıave prohibited the collection of "live sand" (i.e. sand material, typically containing a high liversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within ıe Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores an(the removal of this habitat was determined to adversely impact marine productivity, fisher :s, wildlife habitat, and water quality (FDEP 1998). In review of the adverse effects this project nay have on EFH, EPA requests the applicant conduct an environmental assessment 'ithin the boundaries of the borrow areas.

EPA is also opposed ɔ the project until the applicant provides a mitigation plan that adequately compensates fo unavoidable impacts to nearshore hard bottom resources. The project toe of fill proposed :xtends 430 to 570 feet offshore and will impact approximately 5.17 acres of nearshore har . bottom. The applicant states by using the time averaging method, the construction of a 2.20 ; :re artificial reef would provide adequate compensation for impacts to 5.17 acres of hard bottom ı sources. EPA concludes that it is premature to review the applicant's proposed mitigation plan v ıen impacts to nearshore hard bottom are at an unacceptable level. We request the USACE re· ıew other practicable alternatives to what is proposed to reduce or eliminate impacts to near s ore hard bottom. EPA will then consider mitigation at a minimum 1:1 ratio, after the applican has avoided and/or minimized hard bottom impacts to the extent practicable.

In accordance with t e procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b), v : continue to advise you that the proposed work will result in substantial and unacceptab ɜ adverse impacts on aquatic resources of national importance. EPA concludes that the nearsho : hard bottom resources of this project should be protected.

Thank you for the oj ɔortunity to comment on this request for authorization. If you should have any questions, please :ontact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanow cz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364

Florida Department of Env ronmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sov eign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Bi ogical effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 19 3 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahass e, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat b ial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mar late for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida

Turbeville, D.B. and G.A Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Ar y Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engi eers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hur cane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engi eers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engi neers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final envi onmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 992. A re-examination of infaunal studies that accompany beach renourishment projects. n S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv Assoc., Tallahassee, Fl. p. 242-257.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 1 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Miller:

This letter is in response to your request for comments on the public notice for the Town of Palm Beach, Phipps Ocean Park, permit application number 200000380 (IP-DSG). The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida. The applicant proposes to obtain fill from two offshore borrow areas to place on the beach. The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Ms. Beth Burger of EPA's West Palm Beach office, inspected the site on April 27, 2000, with Mr. Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mr. Michael Johnson of the National Marine Fisheries Service (NMFS).

According to 33 C.F.R. 320.4(a), every permit application is subject to a public interest review. In performing the public interest review, the Corps of Engineers is required to consider the relative extent of the public and private need for the proposed structure or work, and the need must be balanced against environmental harm. Based upon our review and site inspection, it is our opinion that the project is not necessary nor in the public interest and environmental harm appears to outweigh the benefits. In the information provided by Coastal Technology Corporation after the public notice was issued, a "critical erosion area" is described, which is defined as "a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost." However, information demonstrating that the proposed project area is a critical erosion area was not provided. Further, based upon the site inspection, upland development, recreational interests, wildlife habitat, and important cultural resources do not appear to be threatened by erosion or recession of the beach or dune system. To the contrary, recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) would be lost if the proposed project were implemented. EPA questions the need to restore the beach over the whole project site, and EPA is especially concerned about the area next to the golf course where a large portion of nearshore consists of hardbottom reef habitat. Please provide a detailed discussion of the purpose and need for the complete length of the project.

EPA also has significant questions and concerns with the proposed borrow areas. Borrow Area 1 contains an outfall pipe. Is it a sewage outfall? A standard permit condition requires that uncontaminated fill material be used for projects such as this. Has there been any testing of sediments at Borrow Area 1 to determine contamination? Dredging in the borrow areas has the potential to impact additional hardbottom or coral reef habitats in the vicinity of the borrow areas. What safeguards will be taken to protect adjacent habitats from turbidity or other detrimental impacts of dredging?

The Clean Water Act, Section 404(b)(1) Guidelines at 40 C.F.R. Section 230.10 prohibit avoidable or significant adverse impacts to the aquatic environment. The Guidelines and the Mitigation Memorandum of Agreement between the Corps of Engineers and EPA require that an applicant demonstrate avoidance and minimization of impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. The applicant has failed to provide the necessary alternatives analysis. Please provide a detailed alternatives analysis as required under the Guidelines.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and NMFS found a much greater area of hardbottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hardbottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for all of the acreage of hardbottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hardbottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hardbottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

Nearshore hardbottom structure is colonized by an ecologically diverse community including sponges, corals, sea worms, bryozoans, and barnacles. This structure provides important shallow water fish habitat. Several lines of evidence suggest that nearshore hardbottom habitats along the mainland coast of east Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances. (Lindeman, Snyder). This project is within an area identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service for federally managed species. This area is EFH for juvenile and adult gray and schoolmaster snappers, scamp,

speckled hind, yellowedge grouper, Spanish mackerel, white grunt and spiny lobster. Juvenile gray snappers, among others, were observed during the site inspection by the agencies and are listed in the survey supplied by the applicant. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC. For these reasons, EPA considers the hardbottom habitats found within this project site aquatic resources of national importance.

EPA requests that authorization for this project be denied. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b) between our agencies, we are advising you that the proposed work will have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Ms. Burger at (561) 616-8878.

Sincerely,

John H. Hankinson, Jr.
Regional Administrator

cc: Spencer Simon, FWS, Vero Beach, F
Michael Johnson, NMFS, Miami, F

[Reference: Lindeman, Kenyon C. and David B.Snyder. Nearshore hardbottom fishes of southeast FL and effects of habitat burial caused by dredging. Fish. Bull. 97:508-525 (1999).]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

9 Mayoc

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

MAY 05 2000

SUBJ: Town of Palm Beach, Phipps Ocean Park
PN 200000380 (IP-DSG)

Dear Colonel Miller:

This letter is in response to your request for comments on the above referenced public notice. The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Beth Burger of EPA inspected the site on April 27, 2000, with Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mike Johnson of the National Marine Fisheries Service (NMFS). According to the Clean Water Act Section 404(b)(1) Guidelines and the Memorandum of Agreement between the Corps of Engineers and EPA in determining mitigation under the CWA, an applicant must demonstrate avoidance and minimization of wetland impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. Practicable alternatives include activities which do not involve a discharge of dredged or fill material into the waters of the United States. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Please provide a detailed alternatives analysis including a discussion of the purpose and necessity of the project and an explanation of the "critical erosion area" and its criteria. EPA is particularly concerned over the need to restore the beach next to the golf course where a large portion of nearshore consists of hard bottom reef habitat. Please explain the borrow area site selection and the location of Borrow Area 1 where there is a sewer outfall.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and

NMFS found a much greater area of hard bottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hard bottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for the all of the acreage of hard bottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hard bottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hard bottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

EPA recommends denial of the project at this time. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(a) between our agencies, we are advising you that the proposed work may have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Beth Burger at (561) 616-8878.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: Spencer Simon, FWS, Vero Beach, FL
Michael Johnson, NMFS, Miami, FL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 0 3 2002

Chief, Regulatory Branch
Jacksonville District, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, FL 33401
Attention: Mr. Dale Beter

Subject: Draft Supplement to the Environmental Impact Statement (DSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ # 020353, ERP# COE-E 30039-FL

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the consequences of providing shore protection to the above reach, viz., DEP survey monuments R-116 to R-126. This beach segment was identified in the county-wide General Design Memorandum as being in need of nourishment due to the long-term erosion impacts fostered by maintenance dredging of Lake Worth Inlet. The recent practice of armoring the coastline north of the project area has altered its historic sand budget which has also exacerbated the erosion problem. Widening the narrowed beach will provide/maintain a degree of storm protection to the high rise condominiums which front this reach of shoreline and expand the turtle nesting habitat and public recreation waterward of the seawalls which protect this upland development.

Approximately 1.5 M yards of beach quality sand from two borrow sites to the south of the fill will be used to nourish this 1.9 mile segment of shoreline. Based on previous erosion rates, it is projected that additional material will have to be dredged at 8-year intervals to maintain the initial template. Buffer areas (at least 400') around adjacent hardbottom communities in the borrow area have been designated to lessen potential adverse environmental impacts during the transfer operation(s). Installation of 3.1 acres of artificial reef is proposed as mitigation for the unavoidable losses to biotic communities which be inundated by the dredged material.

As a result of our review, the following observations are provided for your use in preparing/improving the final EIS:

Page iv 6 *Major Findings and Conclusions*. The SEIS states that measures have been taken to avoid, minimize, and compensate for adverse impacts including reducing the fill placement area to avoid nearshore hardbottom resources. Nonetheless, the SEIS preferred alternative comprises the same amount of fill material and extent as was initially proposed in the Public Notice for the project dated, March 22, 2000. In letters dated May 5, 2000 and June 1, 2000, EPA requested the scope of the project be reduced, particularly south of R-121. Irrespective of anticipated sand spreading which occurs after all sand nourishment operations, this design change would have lessened nearshore hard bottom impacts in the vicinity of the adjacent golf course. After our review of this documentation it is unclear what measures were examined to avoid and minimize adverse impacts to hard bottom resources.

An artificial reef (3.1 acres) is being proposed for construction approximately 500 feet north of the project site. However, the SEIS did not include sufficient data about this location (and its depth) to make a determination as to its effectiveness (long-term) as mitigation for the expected losses. Further, EPA is concerned that in the absence of sufficient underlying support (hardbottoms) the reef material will eventually sink into the sand. As you recall, this is what happened at Juno Beach when a similar mitigation structure was built over a sandy substrate.

Furthermore, it remains to be demonstrated whether the proposed artificial structure(s) will compensate for the losses attendant to project impacts. In our scoping letter dated September 25, 2001, we requested that the SEIS include an assessment of the functions and values provided by artificial reefs (placed at different depths) compared with those of the affected natural hardbottoms. In our estimation this is an important evaluation since this project will impact a narrow band of hardbottom resources located adjacent to and encompassing the entire 1.9 mile length of the project.

On the other hand, the proposed mitigation consists of clustering reef structure in one 3.1 acre block which already contains natural nearshore hardbottom communities. We agree that reef structure is desirable, but it has not been demonstrated whether this dense concentration of material at one point on the shoreline compensates for some structure along an almost 2 mile reach. Hence, we were pleased to note that there will be a research effort which will attempt to determine whether construction of a discrete reef adequately provides the necessary in-kind mitigation for the loss of linear nearshore hardbottom resources. If the results of this study indicate that this is not the case, there should be a commitment to provide additional mitigation.

One of the project needs is to restore and maintain the beach for public recreational use, thus benefitting the local economy and creating a public asset. The SEIS would be improved in this regard with some evaluation of the adverse effects on recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) that would be lost if the preferred alternative is selected.

Page 43. Table 2.2 *Major Features and Direct and Indirect Impacts of the proposed Action and Other Alternatives.*

Page 43. *Total Cost*: The statement is made that if the No-Action Alternative were selected, net land losses would be $18 million. It would be helpful if there were some general explanation(s) as to how this and the other values in Table 2.2 were derived. The dry beach in question can only be maintained via indefinite renourishment which is becoming increasingly costly, e.g., more that $14 million during the first 15 years of the project. While the excavated sand is effective in reducing the annual monetary losses from minor storm events (approximately $1.4 M); larger hurricanes would continue to result in extensive property damages. This combination of circumstances makes it difficult to interpret how relative values are assigned unless all the underlying assumptions are detailed.

Appendix E. *Reef Mitigation and Monitoring Program*: Appendices E and F reference the state agencies (e.g.,Florida Department of Environmental Protection) primarily responsible for approval and acceptance of the proposed mitigation together with other natural resources addressed in the SEIS. However, there are federal agencies which also have responsibilities in this regard and this should be noted in the final EIS.

EPA requested that the SEIS provide information on the impacts to the macro-invertebrate communities residing in the proposed borrow area. Instead, the applicant conducted a video survey (Appendix H) of the borrow areas which provides a qualitative overview of the various biotic assemblages. This macro-characterization is instructive, but it does not provide the necessary information to determine whether any additional mitigation would be necessary to compensate for the dredging which will occur in Sites III and IV.

While seven potential borrow sites are mentioned in the text and depicted in Figure 2.6, it would be helpful if a summary of the pertinent information in Coastal Tech 2000d were provided in the final document to verify that Sites III and IV can meet the sediment needs of the project at the least environmental costs.

The SEIS states (page 101) that secondary impacts (elevation of suspended solids) could include downdrift of the project area as "fines" winnow from the material placed in the beach. These secondary effects would reduce algal production (reductions in light levels) and could interfere with the ability of coral to feed heterotrophically. In composite; this would diminish biological function/diversity. Since all borrow material contains some percentage of "fines", this is an unavoidable impact. The SEIS should provide, at least, a quantified range of significance for these secondary impacts and propose appropriate mitigation for them.

On the basis of our review a rating of EC-2 has been assigned. That is, we have some environmental concerns about whether the overall impacts (direct/indirect) attendant to this proposal have been adequately characterized and believe that these short-coming will need to be addressed by additional information in the final document.

Thank you for providing the opportunity to provide comments on the SEIS. If you should have any questions or need additional information on the above comments, please contact Ron Miedema (EPA South Florida Office) at (561) 616-8741.

Sincerely,

Heinz J. Mueller. Chief
Office of Environmental Assessment
Environmental Accountability Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 1 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

This copy obtained from Brian McKay 1/10/00

Dear Colonel Miller:

This letter is in response to your request for comments on the public notice for the Town of Palm Beach, Phipps Ocean Park, permit application number 200000380 (IP-DSG). The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida. The applicant proposes to obtain fill from two offshore borrow areas to place on the beach. The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Ms. Beth Burger of EPA's West Palm Beach office, inspected the site on April 27, 2000, with Mr. Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mr. Michael Johnson of the National Marine Fisheries Service (NMFS).

According to 33 C.F.R. 320.4(a), every permit application is subject to a public interest review. In performing the public interest review, the Corps of Engineers is required to consider the relative extent of the public and private need for the proposed structure or work, and the need must be balanced against environmental harm. Based upon our review and site inspection, it is our opinion that the project is not necessary nor in the public interest and environmental harm appears to outweigh the benefits. In the information provided by Coastal Technology Corporation after the public notice was issued, a "critical erosion area" is described, which is defined as "a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost." However, information demonstrating that the proposed project area is a critical erosion area was not provided. Further, based upon the site inspection, upland development, recreational interests, wildlife habitat, and important cultural resources do not appear to be threatened by erosion or recession of the beach or dune system. To the contrary, recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) would be lost if the proposed project were implemented. EPA questions the need to restore the beach over the whole project site, and EPA is especially concerned about the area next to the golf course where a large portion of nearshore consists of hardbottom reef habitat. Please provide a detailed discussion of the purpose and need for the complete length of the project.

EPA also has significant questions and concerns with the proposed borrow areas. Borrow Area 1 contains an outfall pipe. Is it a sewage outfall? A standard permit condition requires that uncontaminated fill material be used for projects such as this. Has there been any testing of sediments at Borrow Area 1 to determine contamination? Dredging in the borrow areas has the potential to impact additional hardbottom or coral reef habitats in the vicinity of the borrow areas. What safeguards will be taken to protect adjacent habitats from turbidity or other detrimental impacts of dredging?

The Clean Water Act, Section 404(b)(1) Guidelines at 40 C.F.R. Section 230.10 prohibit avoidable or significant adverse impacts to the aquatic environment. The Guidelines and the Mitigation Memorandum of Agreement between the Corps of Engineers and EPA require that an applicant demonstrate avoidance and minimization of impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. The applicant has failed to provide the necessary alternatives analysis. Please provide a detailed alternatives analysis as required under the Guidelines.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and NMFS found a much greater area of hardbottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hardbottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for all of the acreage of hardbottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hardbottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hardbottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

Nearshore hardbottom structure is colonized by an ecologically diverse community including sponges, corals, sea worms, bryozoans, and barnacles. This structure provides important shallow water fish habitat. Several lines of evidence suggest that nearshore hardbottom habitats along the mainland coast of east Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances. (Lindeman, Snyder). This project is within an area identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service for federally managed species. This area is EFH for juvenile and adult gray and schoolmaster snappers, scamp,

speckled hind, yellowedge grouper, Spanish mackerel, white grunt and spiny lobster. Juvenile gray snappers, among others, were observed during the site inspection by the agencies and are listed in the survey supplied by the applicant. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC. For these reasons, EPA considers the hardbottom habitats found within this project site aquatic resources of national importance.

EPA requests that authorization for this project be denied. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b) between our agencies, we are advising you that the proposed work will have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Ms. Burger at (561) 616-8878.

Sincerely,

John H. Hankinson, Jr.
Regional Administrator

cc: Spencer Simon, FWS, Vero Beach, F
Michael Johnson, NMFS, Miami, F

[Reference: Lindeman, Kenyon C. and David B.Snyder. Nearshore hardbottom fishes of southeast FL and effects of habitat burial caused by dredging. Fish. Bull. 97:508-525 (1999).]

Huntington, Kenneth B SAJ

From: Cutt, Penny SAJ

Sent: Wednesday, April 02, 2003 7:50 AM

To: 'Julia Thompson'; Miedema.Ron@epamail.epa.gov; jocelyn.karazsia@noaa.gov; Trish Adams; Cutt, Penny SAJ; Studt, John F SAJ; Huntington, Kenneth B SAJ; 'dbates@co.palm-beach.fl.us'; 'martin.seeling@dep.state.fl.us'

Cc: Sandra Tate; Snyder, David; Michael P. Walther; Peter Ravella; Lois Edwards

Subject: RE: PHIPPS Re: Confirmed Meeting with EPA/NMF/FWS/USACE on Friday, April 4, 2003 at 1 PM

Our office is located at 4400 PGA Blvd, Suite 500 in Palm Beach Gardens. We are in the Embassy Suites Building.

-----Original Message-----
From: Julia Thompson [mailto:jthompson@coastaltechcorp.com]
Sent: Tuesday, April 01, 2003 4:25 PM
To: Miedema.Ron@epamail.epa.gov; jocelyn.karazsia@noaa.gov; Trish Adams; Penny Cutt; John F. Studt
Cc: Sandra Tate; Snyder, David; Michael P. Walther; Peter Ravella; Lois Edwards
Subject: PHIPPS Re: Confirmed Meeting with EPA/NMF/FWS/USACE on Friday, April 4, 2003 at 1 PM
Importance: High

All,

The meeting for Phipps Ocean Park, to discuss the proposed artificial reef has been confirmed:

Date: Friday, April 4th
Time: 1 p.m.
Location: Corps offices - 4400 PGA Blvd., Suite 500 (Penny, would you be so kind as to let us know the exact location in your offices where this meeting will take place?)
Participants: Ron Miedema, EPA
Jocelyn Karazsia, National Marine Fisheries
Trish Adams, Fish and Wildlife Service
Penny Cutt, USACE
Sandra Tate, Town of Palm Beach
David Snyder, Continental Shelf Associates
Michael Walther, Coastal Tech

If you have any questions or conflicts, please return email.

Sincerely,
Julia Thompson, Administrator
COASTAL TECH
3625 20th Street
Vero Beach FL 32960
772-562-8580
772-562-8432

----- Original Message -----
From: <Miedema.Ron@epamail.epa.gov>
To: "Lois Edwards" <ledwards@coastaltechcorp.com>
Cc: "dave snyder" <dsnyder@conshelf.com>; "denise turton" <dturton@coastaltechcorp.com>; "julia

thompson" <jthompson@coastaltechcorp.com>; "michael walther" <mwalther@coastaltechcorp.com>; <pravella@coastaltechcorp.com>; "Tate Sandy" <STate@TownofPalmBeach.com>
Sent: Tuesday, April 01, 2003 10:39 AM
Subject: RE: Confirmed Meeting with EPA on Friday, April 4, 2003 at 1 PM

> This to confirm that the artificial reef meeting will now be held at the
> Corps office off PGA Blvd. Same time and date. Ron
>
>
>
> Lois Edwards
> <ledwards@coastalte To: Ron Miedema/R4/USEPA/US@EPA
> chcorp.com> cc: Tate Sandy <STate@TownofPalmBeach.com>, dave
> snyder <dsnyder@conshelf.com>, michael walther
> 03/27/2003 10:45 AM <mwalther@coastaltechcorp.com>,
> pravella@coastaltechcorp.com, julia thompson
> <jthompson@coastaltechcorp.com>, denise turton
> <dturton@coastaltechcorp.com>
> Subject: RE: Confirmed Meeting with EPA on Friday,
> April 4, 2003 at 1 PM
>
>
>
>
>
> Ron:
> Thank you for agreeing to meet with Michael Walther of our office, Sandy
> Tate, Town of Palm Beach and Dave Snyder, CSA regarding the proposed
> artificial reef.
>
> I am writing to confirm a 1:00 pm meeting, in your office at 400 North
> Congress Avenue, West Palm Beach on Friday, April 4, 2003 at 1:00 pm.
>
> I have related to meeting participants your concern relative to
> addressing mitigative reef issues when "avoidance" and "minimization"
> concerns (surrounding the Phipps beach restoration project) have not
> been addressed by the USACE.
>
> We appreciate your time to met with us to provide your comments/concerns
> regarding the proposed artificial reef.
>
> I will be out of the office next week. Please speak with Michael
> Walther of our office if you have any questions prior to the 4/4/03
> meeting or if your schedule changes.
>
> Thanks again Ron.
>
> Regards
> Lois Edwards
> Permit Specialist
> Coastal Technology Corporation
> 3625 20th Street
> Vero Beach, FL 32960
> Ph: 772-562-8580
> Fax: 772-562-8432
>
> ledwards@coastaltechcorp.com
> www.coastaltechcorp.com
>
>

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

Dear Colonel May:

This is in response to your letter dated August 31, 2001, requesting U.S. Environmental Protection Agency (EPA) comments during the scoping process for developing a Supplemental Environmental Impact Statement (SEIS) for permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

EPA is pleased that the U.S. Army Corps of Engineers (USACE) will conduct an SEIS for the Phipps Ocean Beach Nourishment Project. We will work closely with your staff to ensure that the SEIS will provide the appropriate information for us, as environmental stewards, to make sound decisions on future beach nourishment projects. EPA provides the following comments during the scoping process of the SEIS:

- EPA requests the SEIS include a review of the primary, secondary, and cumulative impacts beach nourishment projects have on nearshore and offshore hardbottom resources. It is our understanding that the USACE will soon be processing ten additional beach nourishment projects within the vicinity of the Phipps Ocean Park site. Cumulative impacts caused by all these beach nourishment projects can only be adequately assessed by expanding the scope of the SEIS area.

-We request that the SEIS contain an assessment of the functions offshore and nearshore hardbottom habitats provide which will be affected by dredge and fill activity. Offshore and nearshore hardbottom structure can be colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hardbottom habitats along the east coast of Florida can serve as

nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance.

- EPA requests the SEIS provide information on impacts to the macro-invertebrate communities associated with the proposed borrow area. We believe that the impacts from the dredging operation to sand borrow areas and their associated macro-invertebrate communities may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998).

-EPA requests the SEIS include an assessment of the functions and values provided by artificial reef habitats placed in various depths and compare them to those of natural hardbottom habitats. This assessment should include a review of data collected for the Juno Beach Renourishment Project.

Thank you for the opportunity to comment on the scope of this SEIS. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanowicz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364.

Florida Department of Environmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sovereign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Biological effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 1988 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahassee, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat burial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida.

Turbeville, D.B. and G.A. Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Army Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engineers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hurricane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final environmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 1992. A re-examination of infaunal studies that accompany beach renourishment projects. *In* S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv. Assoc., Tallahassee, Fl. p. 242-257.

McKoy, Peter B SAJ

REFERRED TO NOAA FOR REVIEW/RELEASE

[redacted]

----- Original Message -----

From: **<Miedema.Ron@epamail.epa.gov>**
Date: Thursday, November 1, 2001 7:11 am
Subject: RE: Phipps SEIS Scoping Meeting - Followup

Brice, I have not received anything from your office in regards to the scoping document you reference below. Ron

"McKoy, Peter B SAJ"

<Peter.B.McKoy@saj02.usace .army.mil>
To: 'Peter Ravella' <pravella@coastaltechcorp.com>
cc: Michael Walther <mwalther@coastaltechcorp.com>, Lois Edwards <ledwards@coastaltechcorp.com>, Ron Miedema/R4/USEPA/US@EPA, "'Mike.R.Johnson@noaa.gov'" <Mike.R.Johnson@noaa.gov>, "'linda_Ferrell@fws.gov'" <linda_Ferrell@fws.gov>, "Paulson, Robert W SAJ" <Robert.W.Paulson@saj02.usace.army.mil>, "Dugger, Kenneth R SAJ"
10/31/2001 02:12 PM

McKoy, Peter B SAJ

From: McKoy, Peter B SAJ
Sent: Thursday, November 01, 2001 2:46 PM
To: 'Mike R Johnson'; Miedema.Ron@epamail.epa.gov
Cc: McKoy, Peter B SAJ; Dugger, Kenneth R SAJ; ledwards@coastaltechcorp.com; linda_Ferrell@fws.gov; Burns, Marie G SAJ; mwalther@coastaltechcorp.com; pravella@coastaltechcorp.com; Paulson, Robert W SAJ
Subject: RE: RE: Phipps SEIS Scoping Meeting - Followup

Mike and Ron- I am sorry if you did not receive my e-mail on the scoping document last week. I believe the document is complete and covers all of the issues that we discussed during our scoping meeting. I understand that you both are very busy, but if you could review the document as soon as possible it would be greatly appreciated. Thanks, Brice

-----Original Message-----

----- Original Message -----

From: <Miedema.Ron@epamail.epa.gov>
Date: Thursday, November 1, 2001 7:11 am
Subject: RE: Phipps SEIS Scoping Meeting - Followup

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"McKoy, Peter B SAJ"

<Peter.B.McKoy@saj02.usace .army.mil>
To: 'Peter Ravella' <pravella@coastaltechcorp.com>
cc: Michael Walther <mwalther@coastaltechcorp.com>, Lois Edwards
10/31/2001 02:12 PM

McKoy, Peter B SAJ

From: McKoy, Peter B SAJ
Sent: Thursday, November 01, 2001 10:26 AM
To: 'Miedema.Ron@epamail.epa.gov'; Lois Edwards
Cc: linda_ferrell@fws.gov; mike.r.johnson@noaa.gov; McKoy, Peter B SAJ; Paulson, Robert W SAJ
Subject: RE: Phipss SEIS - Scope of Work

Ron- The scoping document was sent out last week. It is enclosed for your review. Thanks, Brice

2001-10-23 SEIS Scope.doc

-----Original Message-----

From: **Miedema.Ron@epamail.epa.gov [mailto:Miedema.Ron@epamail.epa.gov]**
Sent: Thursday, November 01, 2001 7:34 AM
To: Lois Edwards
Cc: linda_ferrell@fws.gov; mike.r.johnson@noaa.gov; Mckoy, Peter B; Paulson, Robert W
Subject: RE: Phipss SEIS - Scope of Work

Good morning all. As stated earlier in a e-mail message, EPA has not received the Draft SEIS scope document you reference below. I think requiring EPA to have comments back to you by tomorrow is premature since I will not be able to review it until next week. (That is if I receive it). Ron

Lois Edwards <ledwards@coastaltechcorp.com> 10/31/2001 04:08 PM

To: Ron Miedema/R4/USEPA/US@EPA
cc: mike.r.johnson@noaa.gov, linda_ferrell@fws.gov, robert.w.paulson@saj02.usace.army.mil, brice mckoy <peter.b.mckoy@saj02.usace.army.mil>
Subject: RE: Phipss SEIS - Scope of Work

Good afternoon all!

Brice McKoy has requested that we contact you all regarding the following:

1. The USACE has accepted the DRAFT SEIS scope document (forwarded to you by Brice last week for comment).
2. Our intent to develop the SEIS as described in the scope document.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

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nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance.

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Thank you for the opportunity to comment on the scope of this SEIS. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
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WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
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SEP 25 2001

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ATLANTA, GEORGIA 30303-8960

OCT 0 3 2002

Chief, Regulatory Branch
Jacksonville District, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, FL 33401
Attention: Mr. Dale Beter

Subject: Draft Supplement to the Environmental Impact Statement (DSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ # 020353, ERP# COE-E 30039-FL

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the consequences of providing shore protection to the above reach, viz., DEP survey monuments R-116 to R-126. This beach segment was identified in the county-wide General Design Memorandum as being in need of nourishment due to the long-term erosion impacts fostered by maintenance dredging of Lake Worth Inlet. The recent practice of armoring the coastline north of the project area has altered its historic sand budget which has also exacerbated the erosion problem. Widening the narrowed beach will provide/maintain a degree of storm protection to the high rise condominiums which front this reach of shoreline and expand the turtle nesting habitat and public recreation waterward of the seawalls which protect this upland development.

Approximately 1.5 M yards of beach quality sand from two borrow sites to the south of the fill will be used to nourish this 1.9 mile segment of shoreline. Based on previous erosion rates, it is projected that additional material will have to be dredged at 8-year intervals to maintain the initial template. Buffer areas (at least 400') around adjacent hardbottom communities in the borrow area have been designated to lessen potential adverse environmental impacts during the transfer operation(s). Installation of 3.1 acres of artificial reef is proposed as mitigation for the unavoidable losses to biotic communities which be inundated by the dredged material.

As a result of our review, the following observations are provided for your use in preparing/improving the final EIS:

Page iv 6 *Major Findings and Conclusions*. The SEIS states that measures have been taken to avoid, minimize, and compensate for adverse impacts including reducing the fill placement area to avoid nearshore hardbottom resources. Nonetheless, the SEIS preferred alternative comprises the same amount of fill material and extent as was initially proposed in the Public Notice for the project dated, March 22, 2000. In letters dated May 5, 2000 and June 1, 2000, EPA requested the scope of the project be reduced, particularly south of R-121. Irrespective of anticipated sand spreading which occurs after all sand nourishment operations, this design change would have lessened nearshore hard bottom impacts in the vicinity of the adjacent golf course. After our review of this documentation it is unclear what measures were examined to avoid and minimize adverse impacts to hard bottom resources.

An artificial reef (3.1 acres) is being proposed for construction approximately 500 feet north of the project site. However, the SEIS did not include sufficient data about this location (and its depth) to make a determination as to its effectiveness (long-term) as mitigation for the expected losses. Further, EPA is concerned that in the absence of sufficient underlying support (hardbottoms) the reef material will eventually sink into the sand. As you recall, this is what happened at Juno Beach when a similar mitigation structure was built over a sandy substrate.

Furthermore, it remains to be demonstrated whether the proposed artificial structure(s) will compensate for the losses attendant to project impacts. In our scoping letter dated September 25, 2001, we requested that the SEIS include an assessment of the functions and values provided by artificial reefs (placed at different depths) compared with those of the affected natural hardbottoms. In our estimation this is an important evaluation since this project will impact a narrow band of hardbottom resources located adjacent to and encompassing the entire 1.9 mile length of the project.

On the other hand, the proposed mitigation consists of clustering reef structure in one 3.1 acre block which already contains natural nearshore hardbottom communities. We agree that reef structure is desirable, but it has not been demonstrated whether this dense concentration of material at one point on the shoreline compensates for some structure along an almost 2 mile reach. Hence, we were pleased to note that there will be a research effort which will attempt to determine whether construction of a discrete reef adequately provides the necessary in-kind mitigation for the loss of linear nearshore hardbottom resources. If the results of this study indicate that this is not the case, there should be a commitment to provide additional mitigation.

One of the project needs is to restore and maintain the beach for public recreational use, thus benefitting the local economy and creating a public asset. The SEIS would be improved in this regard with some evaluation of the adverse effects on recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) that would be lost if the preferred alternative is selected.

Page 43. Table 2.2 *Major Features and Direct and Indirect Impacts of the proposed Action and Other Alternatives.*

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The SEIS states (page 101) that secondary impacts (elevation of suspended solids) could include downdrift of the project area as "fines" winnow from the material placed in the beach. These secondary effects would reduce algal production (reductions in light levels) and could interfere with the ability of coral to feed heterotrophically. In composite; this would diminish biological function/diversity. Since all borrow material contains some percentage of "fines", this is an unavoidable impact. The SEIS should provide, at least, a quantified range of significance for these secondary impacts and propose appropriate mitigation for them.

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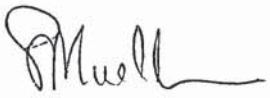

Heinz J. Mueller. Chief
Office of Environmental Assessment
Environmental Accountability Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 0 3 2002

Chief, Regulatory Branch
Jacksonville District, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, FL 33401
Attention: Mr. Dale Beter

Subject: Draft Supplement to the Environmental Impact Statement (DSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ # 020353, ERP# COE-E 30039-FL

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the consequences of providing shore protection to the above reach, viz., DEP survey monuments R-116 to R-126. This beach segment was identified in the county-wide General Design Memorandum as being in need of nourishment due to the long-term erosion impacts fostered by maintenance dredging of Lake Worth Inlet. The recent practice of armoring the coastline north of the project area has altered its historic sand budget which has also exacerbated the erosion problem. Widening the narrowed beach will provide/maintain a degree of storm protection to the high rise condominiums which front this reach of shoreline and expand the turtle nesting habitat and public recreation waterward of the seawalls which protect this upland development.

Approximately 1.5 M yards of beach quality sand from two borrow sites to the south of the fill will be used to nourish this 1.9 mile segment of shoreline. Based on previous erosion rates, it is projected that additional material will have to be dredged at 8-year intervals to maintain the initial template. Buffer areas (at least 400') around adjacent hardbottom communities in the borrow area have been designated to lessen potential adverse environmental impacts during the transfer operation(s). Installation of 3.1 acres of artificial reef is proposed as mitigation for the unavoidable losses to biotic communities which be inundated by the dredged material.

As a result of our review, the following observations are provided for your use in preparing/improving the final EIS:

Page iv 6 *Major Findings and Conclusions*. The SEIS states that measures have been taken to avoid, minimize, and compensate for adverse impacts including reducing the fill placement area to avoid nearshore hardbottom resources. Nonetheless, the SEIS preferred alternative comprises the same amount of fill material and extent as was initially proposed in the Public Notice for the project dated, March 22, 2000. In letters dated May 5, 2000 and June 1, 2000, EPA requested the scope of the project be reduced, particularly south of R-121. Irrespective of anticipated sand spreading which occurs after all sand nourishment operations, this design change would have lessened nearshore hard bottom impacts in the vicinity of the adjacent golf course. After our review of this documentation it is unclear what measures were examined to avoid and minimize adverse impacts to hard bottom resources.

An artificial reef (3.1 acres) is being proposed for construction approximately 500 feet north of the project site. However, the SEIS did not include sufficient data about this location (and its depth) to make a determination as to its effectiveness (long-term) as mitigation for the expected losses. Further, EPA is concerned that in the absence of sufficient underlying support (hardbottoms) the reef material will eventually sink into the sand. As you recall, this is what happened at Juno Beach when a similar mitigation structure was built over a sandy substrate.

Furthermore, it remains to be demonstrated whether the proposed artificial structure(s) will compensate for the losses attendant to project impacts. In our scoping letter dated September 25, 2001, we requested that the SEIS include an assessment of the functions and values provided by artificial reefs (placed at different depths) compared with those of the affected natural hardbottoms. In our estimation this is an important evaluation since this project will impact a narrow band of hardbottom resources located adjacent to and encompassing the entire 1.9 mile length of the project.

On the other hand, the proposed mitigation consists of clustering reef structure in one 3.1 acre block which already contains natural nearshore hardbottom communities. We agree that reef structure is desirable, but it has not been demonstrated whether this dense concentration of material at one point on the shoreline compensates for some structure along an almost 2 mile reach. Hence, we were pleased to note that there will be a research effort which will attempt to determine whether construction of a discrete reef adequately provides the necessary in-kind mitigation for the loss of linear nearshore hardbottom resources. If the results of this study indicate that this is not the case, there should be a commitment to provide additional mitigation.

One of the project needs is to restore and maintain the beach for public recreational use, thus benefitting the local economy and creating a public asset. The SEIS would be improved in this regard with some evaluation of the adverse effects on recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) that would be lost if the preferred alternative is selected.

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Thank you for providing the opportunity to provide comments on the SEIS. If you should have any questions or need additional information on the above comments, please contact Ron Miedema (EPA South Florida Office) at (561) 616-8741.

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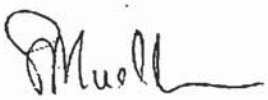

Heinz J. Mueller. Chief
Office of Environmental Assessment
Environmental Accountability Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

Dear Colonel May:

This is in response to your letter dated August 31, 2001, requesting U.S. Environmental Protection Agency (EPA) comments during the scoping process for developing a Supplemental Environmental Impact Statement (SEIS) for permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

EPA is pleased that the U.S. Army Corps of Engineers (USACE) will conduct an SEIS for the Phipps Ocean Beach Nourishment Project. We will work closely with your staff to ensure that the SEIS will provide the appropriate information for us, as environmental stewards, to make sound decisions on future beach nourishment projects. EPA provides the following comments during the scoping process of the SEIS:

-EPA requests the SEIS include a review of the ~~primary, secondary,~~ and cumulative impacts beach nourishment projects have on nearshore and offshore hardbottom resources. It is our understanding that the USACE will soon be processing ten additional beach nourishment projects within the vicinity of the Phipps Ocean Park site. Cumulative impacts caused by all these beach nourishment projects can only be adequately assessed by expanding the scope of the SEIS area.

-We request that the SEIS contain an assessment of the functions offshore and nearshore hardbottom habitats provide which will be affected by dredge and fill activity. Offshore and nearshore hardbottom structure can be colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hardbottom habitats along the east coast of Florida can serve as

nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance.

- EPA requests the SEIS provide information on impacts to the macro-invertebrate communities associated with the proposed borrow area. We believe that the impacts from the dredging operation to sand borrow areas and their associated macro-invertebrate communities may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998).

-EPA requests the SEIS include an assessment of the functions and values provided by artificial reef habitats placed in various depths and compare them to those of natural hardbottom habitats. This assessment should include a review of data collected for the Juno Beach Renourishment Project.

Thank you for the opportunity to comment on the scope of this SEIS. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 0 3 2002

Chief, Regulatory Branch
Jacksonville District, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, FL 33401
Attention: Mr. Dale Beter

Subject: Draft Supplement to the Environmental Impact Statement (DSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ # 020353, ERP# COE-E 30039-FL

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Office of Environmental Assessment
Environmental Accountability Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

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Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
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U.S. Army Corps of Engineers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

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Wilber, P. and M. Stern. 1992. A re-examination of infaunal studies that accompany beach renourishment projects. *In* S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv. Assoc., Tallahassee, Fl. p. 242-257.

UNITED S ATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

MAY 04 2001

Colonel James G. May, Dis ict Engineer
Department of the Army
Jacksonville District Corps f Engineers
Attn: Brice McKoy
400 North Congress Avenu , Suite 130
West Palm Beach, Fl 3340

SUBJECT: Phipps Ocean I urk
200000380(IP- 3M)

Dear Colonel May:

This letter is in respc ıse to permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. he purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along P ipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredge material would be obtained from 2 borrow areas located 0.34 miles offshore, between Departn ent of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the At ıntic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, T wnship 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environm ıtal Protection Agency (EPA) has reviewed the applicant's response letter dated January 25, 20 ı1, and subsequent submittals regarding our concerns with the proposed project. In letter dated May 5, 2000, and June 1, 2000, we requested additional information and expressec our concern with the environmental impacts the proposed project would have on nearshore l ard bottom resources of national importance. On April 26, 2001, members of my staff cond cted a follow up site inspection to determine current conditions of the site. This letter summariz s EPA's position on the project, concentrating especially on Section 404(b)(1) Guidelines, whi h prohibit avoidable or significant adverse impacts to the aquatic environment.

The applicant's "Pr ject Justification Report," states that the effects of the Lake Worth Inlet and construction of s :awalls with rip-rap along a 3-mile segment north of the project have resulted in erosion within he project area and exposure of nearshore hard bottom resources. If the "no action alternati :" is taken to alleviate the sediment losses within the project area, the beach will continue to ero le resulting in loss of recreational beach, loss of turtle nesting habitat, and increased risk of dam .ge to upland property. In addition, the applicant stated that any fill placed within Phipps Oce n Park Beach would result in accretion of sand material in the region of the golf course. This a :cretion would occur in concert with rapid erosion of the fill area resulting in escarpments ı the fill area and poor public perception of the project performance.

The applicant concludes tl it the only practicable alternative available is to place fill material along the entire length of t ie project as proposed in the public notice. Based on our review and site inspection, EPA main uins that the project is not necessary, nor in the public interest and the potential environmental h: m outweighs the benefit. During our site inspection on April 26, 2001, we determined that pproximately 75 to100 feet of beach remains along the entire project site between the high tide ne and the dune system. This observation was made during a high tide, and we did not obser e any critical erosion areas which would threaten the loss of upland development, recreational nterests, or wildlife habitat. To the contrary, the inspection revealed the location of 3 sea turtle iests on the upland beach and nearshore hard bottom resources along 80 percent of the project s e. The nearshore hard bottom structure associated with this project is colonized by an ecologica y diverse community of algae, porifera, and cnidaria, and provides important shallow water f h habitat. Several lines of evidence suggest the nearshore hard bottom habitats along the ast coast of Florida can serve as nursery areas for many coastal fish species and can support cc isiderable larval abundances (Lindeman, Snyder 1999). This project is within an area identifiec as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hard bottom hab ats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amend nents by the SAFMC (NMFS 1999). For these reasons, EPA considers the hard bottom iabitats found within this project site aquatic resources of national importance.

The applicant state: that the City of Lake Worth is the owner of the outfall structure which is located within borrow a ea III. The applicant was informed by the City of Lake Worth that the outfall is inactive and has iot been used for at least the past ten years, but is maintained as a potential emergency disch rge. The applicant concludes that since the outfall has been inactive for the past ten years, it is xpected that no treated sewage from the pipe has infiltrated the sediments within the borr w area. EPA requests that U.S. Army Corps of Engineers (USACE) require the applicant to te this site for contaminants before approving its use as a borrow area for any future projects. F rthermore, EPA believes that the impacts to sand borrow areas and their associated macro-in rtebrate communities from the dredging operation may be more extensive and long-term t an has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1 94, and 1996). Previous studies had concluded that perturbations within borrow areas were iegligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects or the southeast coast of Florida, found that changes to the infaunal community structure may ersist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in liversity and abundance of the infaunal community in borrow areas several years following th dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have or macro-invertebrate communities should be considered as significant because they are either di ctly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird nd Ulanowicz 1989). The State of Florida and the Florida Keys

National Marine Sanctuary ıave prohibited the collection of "live sand" (i.e. sand material, typically containing a high liversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within ıe Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores an the removal of this habitat was determined to adversely impact marine productivity, fisher s, wildlife habitat, and water quality (FDEP 1998). In review of the adverse effects this project nay have on EFH, EPA requests the applicant conduct an environmental assessment ithin the boundaries of the borrow areas.

EPA is also opposed the project until the applicant provides a mitigation plan that adequately compensates fo unavoidable impacts to nearshore hard bottom resources. The project toe of fill proposed xtends 430 to 570 feet offshore and will impact approximately 5.17 acres of nearshore har bottom. The applicant states by using the time averaging method, the construction of a 2.20 a re artificial reef would provide adequate compensation for impacts to 5.17 acres of hard bottom ı sources. EPA concludes that it is premature to review the applicant's proposed mitigation plan v ıen impacts to nearshore hard bottom are at an unacceptable level. We request the USACE re iew other practicable alternatives to what is proposed to reduce or eliminate impacts to near s ore hard bottom. EPA will then consider mitigation at a minimum 1:1 ratio, after the applican has avoided and/or minimized hard bottom impacts to the extent practicable.

In accordance with t e procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b), v : continue to advise you that the proposed work will result in substantial and unacceptab : adverse impacts on aquatic resources of national importance. EPA concludes that the nearsho : hard bottom resources of this project should be protected.

Thank you for the oj portunity to comment on this request for authorization. If you should have any questions, please ontact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanow cz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364

Florida Department of Env ronmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sov eign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Bic ogical effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 19 3 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahass e, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat bi ial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mar late for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida

Turbeville, D.B. and G.A Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Ar: ıy Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engi eers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hurı ane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engi eers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engi ıeers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final envi onmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 992. A re-examination of infaunal studies that accompany beach renourishment projects. ı S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv Assoc., Tallahassee, Fl. p. 242-257.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 1 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Miller:

This letter is in response to your request for comments on the public notice for the Town of Palm Beach, Phipps Ocean Park, permit application number 200000380 (IP-DSG). The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida. The applicant proposes to obtain fill from two offshore borrow areas to place on the beach. The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Ms. Beth Burger of EPA's West Palm Beach office, inspected the site on April 27, 2000, with Mr. Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mr. Michael Johnson of the National Marine Fisheries Service (NMFS).

According to 33 C.F.R. 320.4(a), every permit application is subject to a public interest review. In performing the public interest review, the Corps of Engineers is required to consider the relative extent of the public and private need for the proposed structure or work, and the need must be balanced against environmental harm. Based upon our review and site inspection, it is our opinion that the project is not necessary nor in the public interest and environmental harm appears to outweigh the benefits. In the information provided by Coastal Technology Corporation after the public notice was issued, a "critical erosion area" is described, which is defined as "a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost." However, information demonstrating that the proposed project area is a critical erosion area was not provided. Further, based upon the site inspection, upland development, recreational interests, wildlife habitat, and important cultural resources do not appear to be threatened by erosion or recession of the beach or dune system. To the contrary, recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) would be lost if the proposed project were implemented. EPA questions the need to restore the beach over the whole project site, and EPA is especially concerned about the area next to the golf course where a large portion of nearshore consists of hardbottom reef habitat. Please provide a detailed discussion of the purpose and need for the complete length of the project.

EPA also has significant questions and concerns with the proposed borrow areas. Borrow Area 1 contains an outfall pipe. Is it a sewage outfall? A standard permit condition requires that uncontaminated fill material be used for projects such as this. Has there been any testing of sediments at Borrow Area 1 to determine contamination? Dredging in the borrow areas has the potential to impact additional hardbottom or coral reef habitats in the vicinity of the borrow areas. What safeguards will be taken to protect adjacent habitats from turbidity or other detrimental impacts of dredging?

The Clean Water Act, Section 404(b)(1) Guidelines at 40 C.F.R. Section 230.10 prohibit avoidable or significant adverse impacts to the aquatic environment. The Guidelines and the Mitigation Memorandum of Agreement between the Corps of Engineers and EPA require that an applicant demonstrate avoidance and minimization of impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. The applicant has failed to provide the necessary alternatives analysis. Please provide a detailed alternatives analysis as required under the Guidelines.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and NMFS found a much greater area of hardbottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hardbottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for all of the acreage of hardbottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hardbottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hardbottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

Nearshore hardbottom structure is colonized by an ecologically diverse community including sponges, corals, sea worms, bryozoans, and barnacles. This structure provides important shallow water fish habitat. Several lines of evidence suggest that nearshore hardbottom habitats along the mainland coast of east Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances. (Lindeman, Snyder). This project is within an area identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service for federally managed species. This area is EFH for juvenile and adult gray and schoolmaster snappers, scamp,

speckled hind, yellowedge grouper, Spanish mackerel, white grunt and spiny lobster. Juvenile gray snappers, among others, were observed during the site inspection by the agencies and are listed in the survey supplied by the applicant. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC. For these reasons, EPA considers the hardbottom habitats found within this project site aquatic resources of national importance.

EPA requests that authorization for this project be denied. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b) between our agencies, we are advising you that the proposed work will have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Ms. Burger at (561) 616-8878.

Sincerely,

John H. Hankinson, Jr.
Regional Administrator

cc: Spencer Simon, FWS, Vero Beach, F
Michael Johnson, NMFS, Miami, F

[Reference: Lindeman, Kenyon C. and David B.Snyder. Nearshore hardbottom fishes of southeast FL and effects of habitat burial caused by dredging. Fish. Bull. 97:508-525 (1999).]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

9 Mayoo
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Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

MAY 05 2000

SUBJ: Town of Palm Beach, Phipps Ocean Park
PN 200000380 (IP-DSG)

Dear Colonel Miller:

This letter is in response to your request for comments on the above referenced public notice. The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Beth Burger of EPA inspected the site on April 27, 2000, with Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mike Johnson of the National Marine Fisheries Service (NMFS). According to the Clean Water Act Section 404(b)(1) Guidelines and the Memorandum of Agreement between the Corps of Engineers and EPA in determining mitigation under the CWA, an applicant must demonstrate avoidance and minimization of wetland impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. Practicable alternatives include activities which do not involve a discharge of dredged or fill material into the waters of the United States. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Please provide a detailed alternatives analysis including a discussion of the purpose and necessity of the project and an explanation of the "critical erosion area" and its criteria. EPA is particularly concerned over the need to restore the beach next to the golf course where a large portion of nearshore consists of hard bottom reef habitat. Please explain the borrow area site selection and the location of Borrow Area 1 where there is a sewer outfall.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and

NMFS found a much greater area of hard bottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hard bottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for the all of the acreage of hard bottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hard bottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hard bottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

EPA recommends denial of the project at this time. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(a) between our agencies, we are advising you that the proposed work may have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Beth Burger at (561) 616-8878.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: Spencer Simon, FWS, Vero Beach, FL
Michael Johnson, NMFS, Miami, FL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 0 3 2002

Chief, Regulatory Branch
Jacksonville District, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, FL 33401
Attention: Mr. Dale Beter

Subject: Draft Supplement to the Environmental Impact Statement (DSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ # 020353, ERP# COE-E 30039-FL

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the consequences of providing shore protection to the above reach, viz., DEP survey monuments R-116 to R-126. This beach segment was identified in the county-wide General Design Memorandum as being in need of nourishment due to the long-term erosion impacts fostered by maintenance dredging of Lake Worth Inlet. The recent practice of armoring the coastline north of the project area has altered its historic sand budget which has also exacerbated the erosion problem. Widening the narrowed beach will provide/maintain a degree of storm protection to the high rise condominiums which front this reach of shoreline and expand the turtle nesting habitat and public recreation waterward of the seawalls which protect this upland development.

Approximately 1.5 M yards of beach quality sand from two borrow sites to the south of the fill will be used to nourish this 1.9 mile segment of shoreline. Based on previous erosion rates, it is projected that additional material will have to be dredged at 8-year intervals to maintain the initial template. Buffer areas (at least 400') around adjacent hardbottom communities in the borrow area have been designated to lessen potential adverse environmental impacts during the transfer operation(s). Installation of 3.1 acres of artificial reef is proposed as mitigation for the unavoidable losses to biotic communities which be inundated by the dredged material.

As a result of our review, the following observations are provided for your use in preparing/improving the final EIS:

Page iv 6 *Major Findings and Conclusions*. The SEIS states that measures have been taken to avoid, minimize, and compensate for adverse impacts including reducing the fill placement area to avoid nearshore hardbottom resources. Nonetheless, the SEIS preferred alternative comprises the same amount of fill material and extent as was initially proposed in the Public Notice for the project dated, March 22, 2000. In letters dated May 5, 2000 and June 1, 2000, EPA requested the scope of the project be reduced, particularly south of R-121. Irrespective of anticipated sand spreading which occurs after all sand nourishment operations, this design change would have lessened nearshore hard bottom impacts in the vicinity of the adjacent golf course. After our review of this documentation it is unclear what measures were examined to avoid and minimize adverse impacts to hard bottom resources.

An artificial reef (3.1 acres) is being proposed for construction approximately 500 feet north of the project site. However, the SEIS did not include sufficient data about this location (and its depth) to make a determination as to its effectiveness (long-term) as mitigation for the expected losses. Further, EPA is concerned that in the absence of sufficient underlying support (hardbottoms) the reef material will eventually sink into the sand. As you recall, this is what happened at Juno Beach when a similar mitigation structure was built over a sandy substrate.

Furthermore, it remains to be demonstrated whether the proposed artificial structure(s) will compensate for the losses attendant to project impacts. In our scoping letter dated September 25, 2001, we requested that the SEIS include an assessment of the functions and values provided by artificial reefs (placed at different depths) compared with those of the affected natural hardbottoms. In our estimation this is an important evaluation since this project will impact a narrow band of hardbottom resources located adjacent to and encompassing the entire 1.9 mile length of the project.

On the other hand, the proposed mitigation consists of clustering reef structure in one 3.1 acre block which already contains natural nearshore hardbottom communities. We agree that reef structure is desirable, but it has not been demonstrated whether this dense concentration of material at one point on the shoreline compensates for some structure along an almost 2 mile reach. Hence, we were pleased to note that there will be a research effort which will attempt to determine whether construction of a discrete reef adequately provides the necessary in-kind mitigation for the loss of linear nearshore hardbottom resources. If the results of this study indicate that this is not the case, there should be a commitment to provide additional mitigation.

One of the project needs is to restore and maintain the beach for public recreational use, thus benefitting the local economy and creating a public asset. The SEIS would be improved in this regard with some evaluation of the adverse effects on recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) that would be lost if the preferred alternative is selected.

Page 43. Table 2.2 *Major Features and Direct and Indirect Impacts of the proposed Action and Other Alternatives.*

Page 43. *Total Cost*: The statement is made that if the No-Action Alternative were selected, net land losses would be $18 million. It would be helpful if there were some general explanation(s) as to how this and the other values in Table 2.2 were derived. The dry beach in question can only be maintained via indefinite renourishment which is becoming increasingly costly, e.g., more that $14 million during the first 15 years of the project. While the excavated sand is effective in reducing the annual monetary losses from minor storm events (approximately $1.4 M); larger hurricanes would continue to result in extensive property damages. This combination of circumstances makes it difficult to interpret how relative values are assigned unless all the underlying assumptions are detailed.

Appendix E. *Reef Mitigation and Monitoring Program*: Appendices E and F reference the state agencies (e.g.,Florida Department of Environmental Protection) primarily responsible for approval and acceptance of the proposed mitigation together with other natural resources addressed in the SEIS. However, there are federal agencies which also have responsibilities in this regard and this should be noted in the final EIS.

EPA requested that the SEIS provide information on the impacts to the macro-invertebrate communities residing in the proposed borrow area. Instead, the applicant conducted a video survey (Appendix H) of the borrow areas which provides a qualitative overview of the various biotic assemblages. This macro-characterization is instructive, but it does not provide the necessary information to determine whether any additional mitigation would be necessary to compensate for the dredging which will occur in Sites III and IV.

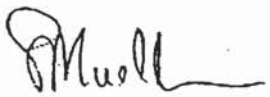
While seven potential borrow sites are mentioned in the text and depicted in Figure 2.6, it would be helpful if a summary of the pertinent information in Coastal Tech 2000d were provided in the final document to verify that Sites III and IV can meet the sediment needs of the project at the least environmental costs.

The SEIS states (page 101) that secondary impacts (elevation of suspended solids) could include downdrift of the project area as "fines" winnow from the material placed in the beach. These secondary effects would reduce algal production (reductions in light levels) and could interfere with the ability of coral to feed heterotrophically. In composite; this would diminish biological function/diversity. Since all borrow material contains some percentage of "fines", this is an unavoidable impact. The SEIS should provide, at least, a quantified range of significance for these secondary impacts and propose appropriate mitigation for them.

On the basis of our review a rating of EC-2 has been assigned. That is, we have some environmental concerns about whether the overall impacts (direct/indirect) attendant to this proposal have been adequately characterized and believe that these short-coming will need to be addressed by additional information in the final document.

Thank you for providing the opportunity to provide comments on the SEIS. If you should have any questions or need additional information on the above comments, please contact Ron Miedema (EPA South Florida Office) at (561) 616-8741.

Sincerely,



Heinz J. Mueller. Chief
Office of Environmental Assessment
Environmental Accountability Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

Dear Colonel May:

This is in response to your letter dated August 31, 2001, requesting U.S. Environmental Protection Agency (EPA) comments during the scoping process for developing a Supplemental Environmental Impact Statement (SEIS) for permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

EPA is pleased that the U.S. Army Corps of Engineers (USACE) will conduct an SEIS for the Phipps Ocean Beach Nourishment Project. We will work closely with your staff to ensure that the SEIS will provide the appropriate information for us, as environmental stewards, to make sound decisions on future beach nourishment projects. EPA provides the following comments during the scoping process of the SEIS:

-EPA requests the SEIS include a review of the primary, secondary, and cumulative impacts beach nourishment projects have on nearshore and offshore hardbottom resources. It is our understanding that the USACE will soon be processing ten additional beach nourishment projects within the vicinity of the Phipps Ocean Park site. Cumulative impacts caused by all these beach nourishment projects can only be adequately assessed by expanding the scope of the SEIS area.

-We request that the SEIS contain an assessment of the functions offshore and nearshore hardbottom habitats provide which will be affected by dredge and fill activity. Offshore and nearshore hardbottom structure can be colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hardbottom habitats along the east coast of Florida can serve as

nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance.

- EPA requests the SEIS provide information on impacts to the macro-invertebrate communities associated with the proposed borrow area. We believe that the impacts from the dredging operation to sand borrow areas and their associated macro-invertebrate communities may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998).

-EPA requests the SEIS include an assessment of the functions and values provided by artificial reef habitats placed in various depths and compare them to those of natural hardbottom habitats. This assessment should include a review of data collected for the Juno Beach Renourishment Project.

Thank you for the opportunity to comment on the scope of this SEIS. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanowicz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364.

Florida Department of Environmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sovereign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Biological effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 1988 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahassee, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat burial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida.

Turbeville, D.B. and G.A. Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Army Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engineers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hurricane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final environmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 1992. A re-examination of infaunal studies that accompany beach renourishment projects. *In* S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv. Assoc., Tallahassee, Fl. p. 242-257.

UNITED S ATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

MAY 04 2001

Colonel James G. May, Dis ict Engineer
Department of the Army
Jacksonville District Corps f Engineers
Attn: Brice McKoy
400 North Congress Avenu , Suite 130
West Palm Beach, Fl 3340

SUBJECT: Phipps Ocean I urk
200000380(IP- 3M)

Dear Colonel May:

This letter is in respc ıse to permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. he purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along P ipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredge material would be obtained from 2 borrow areas located 0.34 miles offshore, between Departn ent of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the At ıntic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, T wnship 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environm ıtal Protection Agency (EPA) has reviewed the applicant's response letter dated January 25, 2C 1, and subsequent submittals regarding our concerns with the proposed project. In lette dated May 5, 2000, and June 1, 2000, we requested additional information and expressec our concern with the environmental impacts the proposed project would have on nearshore l ard bottom resources of national importance. On April 26, 2001, members of my staff cond cted a follow up site inspection to determine current conditions of the site. This letter summariz s EPA's position on the project, concentrating especially on Section 404(b)(1) Guidelines, whi h prohibit avoidable or significant adverse impacts to the aquatic environment.

The applicant's "Pr ject Justification Report," states that the effects of the Lake Worth Inlet and construction of s awalls with rip-rap along a 3-mile segment north of the project have resulted in erosion within he project area and exposure of nearshore hard bottom resources. If the "no action alternati e" is taken to alleviate the sediment losses within the project area, the beach will continue to ero le resulting in loss of recreational beach, loss of turtle nesting habitat, and increased risk of dam ge to upland property. In addition, the applicant stated that any fill placed within Phipps Oce n Park Beach would result in accretion of sand material in the region of the golf course. This a cretion would occur in concert with rapid erosion of the fill area resulting in escarpments n the fill area and poor public perception of the project performance.

The applicant concludes tl ıt the only practicable alternative available is to place fill material along the entire length of ı ıe project as proposed in the public notice. Based on our review and site inspection, EPA main ıins that the project is not necessary, nor in the public interest and the potential environmental h: ım outweighs the benefit. During our site inspection on April 26, 2001, we determined that pproximately 75 to100 feet of beach remains along the entire project site between the high tide .ne and the dune system. This observation was made during a high tide, and we did not obser ɛ any critical erosion areas which would threaten the loss of upland development, recreational nterests, or wildlife habitat. To the contrary, the inspection revealed the location of 3 sea turtle ıests on the upland beach and nearshore hard bottom resources along 80 percent of the project s ɛ. The nearshore hard bottom structure associated with this project is colonized by an ecologica y diverse community of algae, porifera, and cnidaria, and provides important shallow water f .h habitat. Several lines of evidence suggest the nearshore hard bottom habitats along the ast coast of Florida can serve as nursery areas for many coastal fish species and can support cı ısiderable larval abundances (Lindeman, Snyder 1999). This project is within an area identifiec as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hard bottom hab :ats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amend nents by the SAFMC (NMFS 1999). For these reasons, EPA considers the hard bottom ıabitats found within this project site aquatic resources of national importance.

The applicant states that the City of Lake Worth is the owner of the outfall structure which is located within borrow ɜ ea III. The applicant was informed by the City of Lake Worth that the outfall is inactive and has ıot been used for at least the past ten years, but is maintained as a potential emergency disch rge. The applicant concludes that since the outfall has been inactive for the past ten years, it is :xpected that no treated sewage from the pipe has infiltrated the sediments within the borr w area. EPA requests that U.S. Army Corps of Engineers (USACE) require the applicant to te : this site for contaminants before approving its use as a borrow area for any future projects. F rthermore, EPA believes that the impacts to sand borrow areas and their associated macro-in ɜrtebrate communities from the dredging operation may be more extensive and long-term t an has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1 94, and 1996). Previous studies had concluded that perturbations within borrow areas were ıegligible due to rapid re-establishment of the infaunal communities. However, re-examination ɔf the data from the borrow and reference areas of four beach renourishment projects or the southeast coast of Florida, found that changes to the infaunal community structure may ɔersist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in liversity and abundance of the infaunal community in borrow areas several years following th dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have or macro-invertebrate communities should be considered as significant because they are either di ɜctly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird nd Ulanowicz 1989). The State of Florida and the Florida Keys

National Marine Sanctuary ıave prohibited the collection of "live sand" (i.e. sand material, typically containing a high liversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within ıe Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores an the removal of this habitat was determined to adversely impact marine productivity, fisher :s, wildlife habitat, and water quality (FDEP 1998). In review of the adverse effects this project nay have on EFH, EPA requests the applicant conduct an environmental assessment /ithin the boundaries of the borrow areas.

EPA is also opposed › the project until the applicant provides a mitigation plan that adequately compensates fo unavoidable impacts to nearshore hard bottom resources. The project toe of fill proposed :xtends 430 to 570 feet offshore and will impact approximately 5.17 acres of nearshore har . bottom. The applicant states by using the time averaging method, the construction of a 2.20 a :re artificial reef would provide adequate compensation for impacts to 5.17 acres of hard bottom ı sources. EPA concludes that it is premature to review the applicant's proposed mitigation plan v ıen impacts to nearshore hard bottom are at an unacceptable level. We request the USACE re- iew other practicable alternatives to what is proposed to reduce or eliminate impacts to near s ore hard bottom. EPA will then consider mitigation at a minimum 1:1 ratio, after the applican has avoided and/or minimized hard bottom impacts to the extent practicable.

In accordance with t e procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b), v : continue to advise you that the proposed work will result in substantial and unacceptab ɜ adverse impacts on aquatic resources of national importance. EPA concludes that the nearsho : hard bottom resources of this project should be protected.

Thank you for the oj ›ortunity to comment on this request for authorization. If you should have any questions, please :ontact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanow cz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364

Florida Department of Env ronmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sov eign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Bi ogical effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 19 3 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahass e, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat b ial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mar late for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida

Turbeville, D.B. and G.A Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Ar y Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engi eers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hur cane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engi eers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engi neers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final envi onmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 992. A re-examination of infaunal studies that accompany beach renourishment projects. n S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv Assoc., Tallahassee, Fl. p. 242-257.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

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JUN 1 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Colonel Miller:

This letter is in response to your request for comments on the public notice for the Town of Palm Beach, Phipps Ocean Park, permit application number 200000380 (IP-DSG). The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida. The applicant proposes to obtain fill from two offshore borrow areas to place on the beach. The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Ms. Beth Burger of EPA's West Palm Beach office, inspected the site on April 27, 2000, with Mr. Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mr. Michael Johnson of the National Marine Fisheries Service (NMFS).

According to 33 C.F.R. 320.4(a), every permit application is subject to a public interest review. In performing the public interest review, the Corps of Engineers is required to consider the relative extent of the public and private need for the proposed structure or work, and the need must be balanced against environmental harm. Based upon our review and site inspection, it is our opinion that the project is not necessary nor in the public interest and environmental harm appears to outweigh the benefits. In the information provided by Coastal Technology Corporation after the public notice was issued, a "critical erosion area" is described, which is defined as "a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost." However, information demonstrating that the proposed project area is a critical erosion area was not provided. Further, based upon the site inspection, upland development, recreational interests, wildlife habitat, and important cultural resources do not appear to be threatened by erosion or recession of the beach or dune system. To the contrary, recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) would be lost if the proposed project were implemented. EPA questions the need to restore the beach over the whole project site, and EPA is especially concerned about the area next to the golf course where a large portion of nearshore consists of hardbottom reef habitat. Please provide a detailed discussion of the purpose and need for the complete length of the project.

EPA also has significant questions and concerns with the proposed borrow areas. Borrow Area 1 contains an outfall pipe. Is it a sewage outfall? A standard permit condition requires that uncontaminated fill material be used for projects such as this. Has there been any testing of sediments at Borrow Area 1 to determine contamination? Dredging in the borrow areas has the potential to impact additional hardbottom or coral reef habitats in the vicinity of the borrow areas. What safeguards will be taken to protect adjacent habitats from turbidity or other detrimental impacts of dredging?

The Clean Water Act, Section 404(b)(1) Guidelines at 40 C.F.R. Section 230.10 prohibit avoidable or significant adverse impacts to the aquatic environment. The Guidelines and the Mitigation Memorandum of Agreement between the Corps of Engineers and EPA require that an applicant demonstrate avoidance and minimization of impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. The applicant has failed to provide the necessary alternatives analysis. Please provide a detailed alternatives analysis as required under the Guidelines.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and NMFS found a much greater area of hardbottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hardbottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for all of the acreage of hardbottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hardbottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hardbottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

Nearshore hardbottom structure is colonized by an ecologically diverse community including sponges, corals, sea worms, bryozoans, and barnacles. This structure provides important shallow water fish habitat. Several lines of evidence suggest that nearshore hardbottom habitats along the mainland coast of east Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances. (Lindeman, Snyder). This project is within an area identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service for federally managed species. This area is EFH for juvenile and adult gray and schoolmaster snappers, scamp,

speckled hind, yellowedge grouper, Spanish mackerel, white grunt and spiny lobster. Juvenile gray snappers, among others, were observed during the site inspection by the agencies and are listed in the survey supplied by the applicant. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC. For these reasons, EPA considers the hardbottom habitats found within this project site aquatic resources of national importance.

EPA requests that authorization for this project be denied. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(b) between our agencies, we are advising you that the proposed work will have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Ms. Burger at (561) 616-8878.

Sincerely,

John H. Hankinson, Jr.
Regional Administrator

cc: Spencer Simon, FWS, Vero Beach, F
Michael Johnson, NMFS, Miami, F

[Reference: Lindeman, Kenyon C. and David B.Snyder. Nearshore hardbottom fishes of southeast FL and effects of habitat burial caused by dredging. Fish. Bull. 97:508-525 (1999).]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

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MAY 05 2000

Colonel Joe Miller, District Engineer
Attn: Diane S. Griffin
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

SUBJ: Town of Palm Beach, Phipps Ocean Park
PN 200000380 (IP-DSG)

Dear Colonel Miller:

This letter is in response to your request for comments on the above referenced public notice. The project purpose is to restore and stabilize approximately 1.9 miles of beach shoreline. The project site is located in the Atlantic Ocean from monument R-116 to R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The Environmental Protection Agency (EPA) has reviewed the information contained in the public notice and the additional information provided by Coastal Technology Corporation. Beth Burger of EPA inspected the site on April 27, 2000, with Spencer Simon of the U.S. Fish and Wildlife Service (FWS) and Mike Johnson of the National Marine Fisheries Service (NMFS). According to the Clean Water Act Section 404(b)(1) Guidelines and the Memorandum of Agreement between the Corps of Engineers and EPA in determining mitigation under the CWA, an applicant must demonstrate avoidance and minimization of wetland impacts before compensatory mitigation may be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. Practicable alternatives include activities which do not involve a discharge of dredged or fill material into the waters of the United States. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Please provide a detailed alternatives analysis including a discussion of the purpose and necessity of the project and an explanation of the "critical erosion area" and its criteria. EPA is particularly concerned over the need to restore the beach next to the golf course where a large portion of nearshore consists of hard bottom reef habitat. Please explain the borrow area site selection and the location of Borrow Area 1 where there is a sewer outfall.

In the event that avoidance and minimization issues are satisfied, EPA notes that the compensation plan is inadequate to compensate for the proposed impacts. The public notice stated that 1.5 acres of impacts are proposed. However, the site visit by the EPA, FWS, and

NMFS found a much greater area of hard bottom nearshore reef in the project area that would be impacted. The additional information provided by Coastal Technology Corporation also indicated a larger area, 5.18 acres of hard bottom, would be impacted by the project. In the event that avoidance and minimization issues are satisfied, EPA requests compensatory mitigation for the all of the acreage of hard bottom impacts.

Further, EPA is opposed to the project until the mitigation plan is proved to be adequate compensation for impacts to nearshore hard bottom. The permit issued for renourishment of Juno Beach, permit number 199706559 (IP-BP), required monitoring of the compensatory mitigation area to assess fish recruitment and survival and to compare habitat value of artificial reef habitats placed in various depths with natural hard bottom habitat in shallow water. EPA requests that all beach renourishment projects impacting shallow water reef habitats be held in abeyance until we have reviewed the results of the Juno Beach monitoring study.

EPA recommends denial of the project at this time. In accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement Part IV, 3(a) between our agencies, we are advising you that the proposed work may have substantial and unacceptable adverse impacts on aquatic resources of national importance. Thank you for the opportunity to comment on this request for authorization. If you have any questions, please contact Beth Burger at (561) 616-8878.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: Spencer Simon, FWS, Vero Beach, FL
Michael Johnson, NMFS, Miami, FL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 0 3 2002

Chief, Regulatory Branch
Jacksonville District, Corps of Engineers
400 North Congress Avenue, Suite 130
West Palm Beach, FL 33401
Attention: Mr. Dale Beter

Subject: Draft Supplement to the Environmental Impact Statement (DSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ # 020353, ERP# COE-E 30039-FL

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the consequences of providing shore protection to the above reach, viz., DEP survey monuments R-116 to R-126. This beach segment was identified in the county-wide General Design Memorandum as being in need of nourishment due to the long-term erosion impacts fostered by maintenance dredging of Lake Worth Inlet. The recent practice of armoring the coastline north of the project area has altered its historic sand budget which has also exacerbated the erosion problem. Widening the narrowed beach will provide/maintain a degree of storm protection to the high rise condominiums which front this reach of shoreline and expand the turtle nesting habitat and public recreation waterward of the seawalls which protect this upland development.

Approximately 1.5 M yards of beach quality sand from two borrow sites to the south of the fill will be used to nourish this 1.9 mile segment of shoreline. Based on previous erosion rates, it is projected that additional material will have to be dredged at 8-year intervals to maintain the initial template. Buffer areas (at least 400') around adjacent hardbottom communities in the borrow area have been designated to lessen potential adverse environmental impacts during the transfer operation(s). Installation of 3.1 acres of artificial reef is proposed as mitigation for the unavoidable losses to biotic communities which be inundated by the dredged material.

As a result of our review, the following observations are provided for your use in preparing/improving the final EIS:

Page iv 6 *Major Findings and Conclusions*. The SEIS states that measures have been taken to avoid, minimize, and compensate for adverse impacts including reducing the fill placement area to avoid nearshore hardbottom resources. Nonetheless, the SEIS preferred alternative comprises the same amount of fill material and extent as was initially proposed in the Public Notice for the project dated, March 22, 2000. In letters dated May 5, 2000 and June 1, 2000, EPA requested the scope of the project be reduced, particularly south of R-121. Irrespective of anticipated sand spreading which occurs after all sand nourishment operations, this design change would have lessened nearshore hard bottom impacts in the vicinity of the adjacent golf course. After our review of this documentation it is unclear what measures were examined to avoid and minimize adverse impacts to hard bottom resources.

An artificial reef (3.1 acres) is being proposed for construction approximately 500 feet north of the project site. However, the SEIS did not include sufficient data about this location (and its depth) to make a determination as to its effectiveness (long-term) as mitigation for the expected losses. Further, EPA is concerned that in the absence of sufficient underlying support (hardbottoms) the reef material will eventually sink into the sand. As you recall, this is what happened at Juno Beach when a similar mitigation structure was built over a sandy substrate.

Furthermore, it remains to be demonstrated whether the proposed artificial structure(s) will compensate for the losses attendant to project impacts. In our scoping letter dated September 25, 2001, we requested that the SEIS include an assessment of the functions and values provided by artificial reefs (placed at different depths) compared with those of the affected natural hardbottoms. In our estimation this is an important evaluation since this project will impact a narrow band of hardbottom resources located adjacent to and encompassing the entire 1.9 mile length of the project.

On the other hand, the proposed mitigation consists of clustering reef structure in one 3.1 acre block which already contains natural nearshore hardbottom communities. We agree that reef structure is desirable, but it has not been demonstrated whether this dense concentration of material at one point on the shoreline compensates for some structure along an almost 2 mile reach. Hence, we were pleased to note that there will be a research effort which will attempt to determine whether construction of a discrete reef adequately provides the necessary in-kind mitigation for the loss of linear nearshore hardbottom resources. If the results of this study indicate that this is not the case, there should be a commitment to provide additional mitigation.

One of the project needs is to restore and maintain the beach for public recreational use, thus benefitting the local economy and creating a public asset. The SEIS would be improved in this regard with some evaluation of the adverse effects on recreational interests (snorkeling areas) and wildlife habitat (the nearshore hardbottom areas) that would be lost if the preferred alternative is selected.

Page 43. Table 2.2 *Major Features and Direct and Indirect Impacts of the proposed Action and Other Alternatives.*

Page 43. *Total Cost*: The statement is made that if the No-Action Alternative were selected, net land losses would be $18 million. It would be helpful if there were some general explanation(s) as to how this and the other values in Table 2.2 were derived. The dry beach in question can only be maintained via indefinite renourishment which is becoming increasingly costly, e.g., more that $14 million during the first 15 years of the project. While the excavated sand is effective in reducing the annual monetary losses from minor storm events (approximately $1.4 M); larger hurricanes would continue to result in extensive property damages. This combination of circumstances makes it difficult to interpret how relative values are assigned unless all the underlying assumptions are detailed.

Appendix E. *Reef Mitigation and Monitoring Program*: Appendices E and F reference the state agencies (e.g.,Florida Department of Environmental Protection) primarily responsible for approval and acceptance of the proposed mitigation together with other natural resources addressed in the SEIS. However, there are federal agencies which also have responsibilities in this regard and this should be noted in the final EIS.

EPA requested that the SEIS provide information on the impacts to the macro-invertebrate communities residing in the proposed borrow area. Instead, the applicant conducted a video survey (Appendix H) of the borrow areas which provides a qualitative overview of the various biotic assemblages. This macro-characterization is instructive, but it does not provide the necessary information to determine whether any additional mitigation would be necessary to compensate for the dredging which will occur in Sites III and IV.

While seven potential borrow sites are mentioned in the text and depicted in Figure 2.6, it would be helpful if a summary of the pertinent information in Coastal Tech 2000d were provided in the final document to verify that Sites III and IV can meet the sediment needs of the project at the least environmental costs.

The SEIS states (page 101) that secondary impacts (elevation of suspended solids) could include downdrift of the project area as "fines" winnow from the material placed in the beach. These secondary effects would reduce algal production (reductions in light levels) and could interfere with the ability of coral to feed heterotrophically. In composite; this would diminish biological function/diversity. Since all borrow material contains some percentage of "fines", this is an unavoidable impact. The SEIS should provide, at least, a quantified range of significance for these secondary impacts and propose appropriate mitigation for them.

On the basis of our review a rating of EC-2 has been assigned. That is, we have some environmental concerns about whether the overall impacts (direct/indirect) attendant to this proposal have been adequately characterized and believe that these short-coming will need to be addressed by additional information in the final document.

Thank you for providing the opportunity to provide comments on the SEIS. If you should have any questions or need additional information on the above comments, please contact Ron Miedema (EPA South Florida Office) at (561) 616-8741.

Sincerely,

Heinz J. Mueller. Chief
Office of Environmental Assessment
Environmental Accountability Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960
JUN - 3 2004

Colonel Robert M. Carpenter, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Palm Beach Gardens Regulatory Office
Attention: Penny Cutt
4400 PGA Boulevard, Suite 500
Palm Beach Gardens, Florida 33410

SUBJECT: Town of Palm Beach, Phipps Ocean Park
200000380 (IP-PLC)

Dear Colonel Carpenter:

Reference is made to your letter dated May 10, 2004, requesting that we remove our objections to the issuance of a permit for beach re-nourishment at Phipps Ocean Park. The applicant originally proposed to place 1.5 million cubic yards of fill over 1.9 miles of beach. The project would impact 3.1 acres of near shore hard bottom resources and 2 offshore borrow sites. The purpose of the project is to mitigate the long-term erosion impacts from Lake Worth Inlet and the armored coastline north of the project, provide and maintain storm protection to upland improvements, restore and maintain the beach for public recreational use, and provide beach habitat for nesting sea turtles. The project is located in the Atlantic Ocean, between Department of Natural Resources monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environmental Protection Agency (EPA) recommended denial of the original permit application, because the requirements of the Clean Water Act Section 404(b)(1) Guidelines had not been met with regard to avoidance and minimization of hard bottom and borrow area impacts. The U.S. Army Corps of Engineers (Corps) has since provided us with additional information detailing project plans that have avoided the most significant near shore hard bottom resources and reduced the amount of fill material to 750,000 cubic yards covering 1.3 miles of beach and impacts to near shore hard bottom resources to 2.01 acres. Due to these changes and the Corp's willingness to increase near shore hard bottom mitigation from 3.1 acres to 5.3 acres and include special conditions in the permit which require extensive monitoring to protect coral reef resources near the borrow sites during construction, EPA will not request a higher level of review for this project. EPA does, however, have concerns about the use of the Uniform Wetland Mitigation Assessment Method for determining the functional value of aquatic resources. The method has not yet been independently peer reviewed and has shown inconsistent results in field tests.

EPA recommends that until concerns about the validity of the method and variability of results are addressed, applicants verify the Uniform Wetland Mitigation Assessment Method scores using accepted rapid assessment techniques (such as the Wetland Rapid Assessment Procedure or Hydrogeomorphic Method) or standard scientific field methods.

Thank you for the opportunity to comment on this request for authorization. If you should have any questions, please contact Ron Miedema at 400 North Congress Avenue, Suite 120, West Palm Beach, Florida 33401 or by telephone at 561-616-8741.

Sincerely,

J. I. Palmer, Jr.
Regional Administrator

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

Jacksonville District, Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232
Attention: Mr. Dale Beter (Regulatory Branch/West Palm Beach)

Subject: **Final Supplement to the Environmental Impact Statement (FSEIS) for the Phipps Ocean Park Beach Segment of the Palm Beach County Shoreline, Florida - CEQ #040169, ERP# COE-E 30038-FL [dated February, 2004]**

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102 (2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the consequences of providing protection to the above shoreline because of the long-term erosion impacts fostered by maintenance dredging of Lake Worth Inlet. The recent practice of armoring the coastline north of the project area has altered its historic sand budget which has also contributed to the erosion problem. Widening the narrowed beach will provide/maintain a degree of storm protection to the high rise condominiums which front this reach of shoreline and expand the turtle nesting habitat as well as its public recreation potential.

Approximately 1.5 M yards of beach quality sand from two borrow sites to the south of the fill will be used to nourish this 1.9 mile segment of shoreline. Based on previous erosion rates, it is projected that additional material will have to be dredged at 8-year intervals to maintain the initial template. Buffer areas (at least 400') around adjacent hardbottom communities in the borrow area have been designated to lessen potential adverse environmental impacts during the transfer operation(s). Installation of 3.1 acres of artificial reef is proposed as mitigation for the unavoidable losses to biotic communities which be inundated by the dredged material.

Thank you for the opportunity to provide input on this proposal. EPA intends to continue its on-going coordination efforts with the involved principals to ensure that all parties' needs are addressed. If you should have any questions, Mr. Ron Miedema (EPA South Florida Office) at (561) 616-8741 will serve as initial point of contact.

Sincerely,

For Gerald T. Miller

Heinz J. Mueller. Chief
NEPA Program Office

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL | # of pages ▸ 3

To Lois Edwards	From Penny Cutt
Dept./Agency Coastal Tech	Phone # 561 402 3505
Fax # 772 562 8432	Fax # 561 626 6971

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UNITED STATES ENVIRONME
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Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Penny Cutt
4400 PGA Boulevard, Suite 500
Palm Beach Gardens, Fl 33410-06557

SUBJECT: Town of Palm Beach
200302049(IP-PLC)

Dear Colonel May:

This letter is in response to permit application number 200302049(IP-PLC) submitted by the Town of Palm Beach. The purpose of the project is to construct an artificial reef which would serve as mitigation for impacts to nearshore hardbottom located near Phipps Ocean Park. The applicant proposes to place a total of 1.28 acres of limestone boulders. within a 3.1 acre area to mitigate impacts to 3.1 acres of hardbottom associated with the proposed beach nourishment at Phipps Ocean Park. The proposed beach nourishment project is under current review and assigned Department of the Army (DA) permit application number 20000380(IP-PLC). The proposed mitigation site is located in the Atlantic Ocean, between Department of Natural Resources monuments R-112 and R-116, in Section 11, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

The U.S. Environmental Protection Agency (EPA) has completed its review of this project from information contained in the public notice. This letter summarizes EPA's position on the proposed beach nourishment and mitigation projects, concentrating especially on Section 404(b)(1) Guidelines, which prohibit avoidable or significant adverse impacts to the aquatic environment.

In order to fully review the proposed mitigation project, EPA requests that the applicant provide information on measures that have been taken to avoid and minimize impacts to nearshore hardbottom resources proposed under DA permit number 20000380(IP-PLC). By letters dated May 5 and June 1, 2000, EPA expressed concerns over the nearshore hardbottom impacts proposed by the beach nourishment project at Phipps Ocean Park. To date, EPA has not received a response to our letters. EPA will consider compensatory mitigation for impacts to hardbottom resources only after the applicant clearly demonstrates that requirements for avoidance and minimization have been satisfied. According to the Clean Water Act Section 404(b)(1) Guidelines and February 6, 1990, Memorandum of Agreement between the Corps of Engineers and EPA in determining mitigation, an applicant must demonstrate avoidance and minimization of impacts before compensatory mitigation can be considered. Specifically, no

discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. Practicable alternatives include activities which do not involve the discharge of dredged or fill material into waters of the United States.

Based on our review and site inspections, EPA is concerned that the beach nourishment project may not be necessary, and the potential environmental harm may outweigh the benefit. During our site inspections, we determined that approximately 50 to100 feet of beach remains along the entire project site between the high tide line and the dune system. This observation was made during a high tide, and we did not observe any critical erosion areas which would threaten the loss of upland development, recreational interests, or wildlife habitat. To the contrary, the inspections revealed the location of numerous sea turtle nests on the upland beach, and the nearshore hardbottom served as a natural barrier to reduce wave action and protect upland development. The nearshore hardbottom structure associated with this project is colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Studies suggest the nearshore hardbottom habitats along the east coast of Florida can serve as nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council (SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance (ARNI).

Since avoidance and minimization have not been adequately demonstrated, EPA concludes that it is premature to review the applicant's proposed mitigation plan. In the event that avoidance and minimization are demonstrated in the future, EPA requests that the applicant provide the following information to document that the proposed mitigation plans are appropriate to offset project impacts.

1. A bathymetric survey of the site.
2. Detailed mitigation plan and development schedule.
3. Insurance that the proposed artificial reef will not sink and be permanently covered by the sandy ocean bottom.
4. Detailed monitoring report plan and description of success criteria.
5. Discussion of similarities and differences between the impact and mitigation sites in terms of water depth and tidal conditions.
6. The responsible party for the long-term management of the mitigation area.
7. Description on how the limestone boulders will be protected against lateral movements over the seafloor.
8. The nearest public parking and access point to the mitigation site.

In conclusion, EPA believes that the permit for the mitigation plan is not approvable as proposed, because compliance with the 404(b)(1) Guidelines has not been demonstrated. We believe that the proposed beach nourishment project will cause permanent degradation of nearshore hardbottom resources, which EPA considers to be ARNI. Therefore, in accordance with the 404(b)(1) Guidelines, we will only consider the proposed mitigation after the applicant has demonstrated that avoidance and minimization of hardbottom resources will be achieved to the maximum extent practicable.

Thank you for the opportunity to comment on this request for authorization. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,

Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Florida and effects of habitat burial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies. Southeast Regional Office, St. Petersburg, Florida.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
WATER MANAGEMENT DIVISION
SOUTH FLORIDA OFFICE
400 NORTH CONGRESS AVE., SUITE 120
WEST PALM BEACH, FLORIDA 33401

SEP 25 2001

Colonel James G. May, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
Attn: Brice McKoy
400 North Congress Avenue, Suite 130
West Palm Beach, Fl 33401

SUBJECT: Phipps Ocean Park Supplemental Environmental Impact Statement
200000380(IP-BM)

Dear Colonel May:

This is in response to your letter dated August 31, 2001, requesting U.S. Environmental Protection Agency (EPA) comments during the scoping process for developing a Supplemental Environmental Impact Statement (SEIS) for permit application number 200000380(IP-BM) submitted by the Town of Palm Beach. The purpose of the project is to restore and stabilize 10,032 linear feet of beach shoreline along Phipps Ocean Park Beach with 1.5 million cubic yards of ocean dredged sand material. The dredged material would be obtained from 2 borrow areas located 0.34 miles offshore, between Department of Natural Resources (DNR) monuments R-127 and R-134. The project is located in the Atlantic Ocean, between DNR monuments R-116 and R-126, in Sections 11, 14, and 23, Township 44 South, Range 43 East, Town of Palm Beach, Palm Beach County, Florida.

EPA is pleased that the U.S. Army Corps of Engineers (USACE) will conduct an SEIS for the Phipps Ocean Beach Nourishment Project. We will work closely with your staff to ensure that the SEIS will provide the appropriate information for us, as environmental stewards, to make sound decisions on future beach nourishment projects. EPA provides the following comments during the scoping process of the SEIS:

- EPA requests the SEIS include a review of the primary, secondary, and cumulative impacts beach nourishment projects have on nearshore and offshore hardbottom resources. It is our understanding that the USACE will soon be processing ten additional beach nourishment projects within the vicinity of the Phipps Ocean Park site. Cumulative impacts caused by all these beach nourishment projects can only be adequately assessed by expanding the scope of the SEIS area.

-We request that the SEIS contain an assessment of the functions offshore and nearshore hardbottom habitats provide which will be affected by dredge and fill activity. Offshore and nearshore hardbottom structure can be colonized by an ecologically diverse community of algae, porifera, and cnidaria, and provides important shallow water fish habitat. Several lines of evidence suggest the nearshore hardbottom habitats along the east coast of Florida can serve as

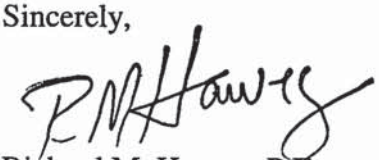
nursery areas for many coastal fish species and can support considerable larval abundances (Lindeman, Snyder 1999). This project is within an area identified as Essential Fish Habitat by the South Atlantic Fishery Management Council(SAFMC) and the National Marine Fisheries Service (NMFS) for federally managed species. Hardbottom habitats are defined as Habitat Areas of Particular Concern in the Fishery Management Plan Amendments by the SAFMC (NMFS 1999). For these reasons, EPA considers the hardbottom habitats found within this project site to be aquatic resources of national importance.

- EPA requests the SEIS provide information on impacts to the macro-invertebrate communities associated with the proposed borrow area. We believe that the impacts from the dredging operation to sand borrow areas and their associated macro-invertebrate communities may be more extensive and long-term than has been suggested in assessments of previous beach nourishment projects (USACE 1987, 1994, and 1996). Previous studies had concluded that perturbations within borrow areas were negligible due to rapid re-establishment of the infaunal communities. However, re-examination of the data from the borrow and reference areas of four beach renourishment projects on the southeast coast of Florida, found that changes to the infaunal community structure may persist for 2-3 years or more (Wilbur and Stern 1992). Other studies have shown a decrease in diversity and abundance of the infaunal community in borrow areas several years following the dredging (Turbeville and Marsh 1982; Goldberg 1989). The impacts that such projects have on macro-invertebrate communities should be considered as significant because they are either directly, or indirectly, a major portion of the diet for many fish and macrocrustaceans (Baird and Ulanowicz 1989). The State of Florida and the Florida Keys National Marine Sanctuary have prohibited the collection of "live sand" (i.e. sand material, typically containing a high diversity of algal, bacterial and macroinvertabrate species, used in the aquarium industry) within the Sanctuary, stating that the sand substrate is an important habitat for grazers and detritivores and the removal of this habitat was determined to adversely impact marine productivity, fisheries, wildlife habitat, and water quality (FDEP 1998).

-EPA requests the SEIS include an assessment of the functions and values provided by artificial reef habitats placed in various depths and compare them to those of natural hardbottom habitats. This assessment should include a review of data collected for the Juno Beach Renourishment Project.

Thank you for the opportunity to comment on the scope of this SEIS. If you should have any questions, please contact Ron Miedema at the letterhead address or by telephone at 561-616-8741.

Sincerely,



Richard M. Harvey, P.E.
Director

cc: FWS, Vero Beach, FL
NMFS, Miami, FL

References

Baird, D. and R.E. Ulanowicz. 1989. The season dynamics of the Chesapeake Bay ecosystem. Ecol. Monogr. 59:329-364.

Florida Department of Environmental Protection (FDEP). 1998. Consolidated Notice of Denial for ERP Activities on Sovereign Submerged Lands. January 8, 1998. File Number 0128760-001.

Goldberg, W.M. 1989. Biological effects of beach restoration in south Florida: the good, the bad, and the ugly. *In* Proc. 1988 National Conf. Beach Preserv. Technol. FL. Shore and Beach Preserv. Assoc., Tallahassee, FL. p. 19-27.

Lindeman, Kenyon C. and David B. Snyder. 1999. Nearshore hardbottom fisheries of southeast Fl and effects of habitat burial caused by dredging. Fish Bul. 97:508-535.

National Marine Fisheries Service (NMFS). 1999. Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies, Southeast Regional Office, St. Petersburg, Florida.

Turbeville, D.B. and G.A. Marsh. 1982. Benthic fauna of an offshore borrow area in Broward County, Florida. U.S. Army Corps of Engineers Coastal Engineering Research Center. Misc. Rep. 82-1.p. 1-43.

U.S. Army Corps of Engineers (USACE). 1987. Design Memorandum Addendum I for Beach Erosion Control and Hurricane Protection. Dade County, Florida, North of Haulover Beach Park. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1994. Palm Beach County, Florida, Shore Protection Project. General Design Memorandum For Jupiter/Carlin Segment. Jacksonville, FL.

U.S. Army Corps of Engineers (USACE). 1996. Coast of Florida erosion and storm effects study: Region III with final environmental impact statement. Jacksonville, FL.

Wilber, P. and M. Stern. 1992. A re-examination of infaunal studies that accompany beach renourishment projects. *In* S. Tait (ed.), Proc. 1992 National Conf. Beach Preserv. Technol., FL. Shore and Beach Preserv. Assoc., Tallahassee, Fl. p. 242-257.